

Shudob Mukherjee Collection
THE

COMPLETION REPORT

OF

SURVEY AND SETTLEMENT

FOR

KANIKA WARD'S ESTATE

(DISTRICT CUTTACK).

SEASONS 1889-94.

BY

SYUD SAKHAWAT HOSSEIN, B.A., M.B.A.C.,

Manager, Assistant Superintendent of Survey and Settlement Office.



CALCUTTA:

PRINTED AT THE BENGAL SECRETARIAT PRESS.

1895.

CONTENTS.

	Pages.
Introduction	i—ii
List of statements and tables	i—ii
List of forms	i

PART I.—General Description.

	Chapter.	Para.	
Situation, boundaries and areas	I	1—5	1—2
Physical features	II	6—19	2—7
Communications	III	19—36	7—11
Forests, fisheries and their products	IV	37—38	11—15
Trades and manufactures	V	39—45	15—16
Towns and markets	VI	46—57	17—19
Population and caste distribution	VII	58—66	19—24
Rainfall	VIII	67—68	24—26
Climate	IX	69—73	26—28
Sources of irrigation	X	74—76	28—29
Tenures and tenure-holders	XI	77—81	29—30
Soil and crops	XII	82—87	30—33
System of agriculture	XIII	88—99	33—38
Live-stock, fodder and fuel	XIV	100—106	38—39
General condition of the people	XV	107—119	39—42
Prices and wages	XVI	120—122	42—44

PART II.—Fiscal History.

Brief history of the estate with an account of previous settlements and their effects	I	123—137	45—51
Rights of the different classes of tenants	II	138—156	51—60
System of collection and collecting agency	III	157—167	61—66
Revisions and alterations made in the rent demand of the last settlement and the causes of such modifications	IV	168—173	67—71
Coercive processes found necessary for collection of rents	V	174—178	71—73

PART III.—Survey and Settlement Operations.

Brief notice of correspondence preliminary to present operations	I	179—182	74—76
Present survey operations	II	183—191	76—79
Boundary disputes	III	192—197	79—82
Classification of soil	IV	198—200	82—84
Attestation	V	201—208	84—87
Rates and allowance for chain measurement	VI	209—222	87—93
Assessment and settlement	VII	223—231	94—99
Records	VIII	232—238	100—104
Time occupied in the operations	IX	239—244	104—106
Inspections by officers	X	245—248	106—115

PART IV.—Results and Cost of Operations.

Details of area of Rajaurkar land, past and present	I	249—260	116—117
Details of area and rental of occupied land, past and present	II	261—266	117—122
Miscellaneous sources of income	III	267—277	122—125
Results of settlement comparatively summed up	IV	278—280	129—131
Costs of operations	V	281—288	131—135

PART V.—*Miscellaneous.*

	Chapter.	Paras.	Pages.
Public Works	I	289—297	136—141
Waste land	II	298—303	141—145
Agricultural experiments and improvements	III	304—306	145—146
Maintenance of records, maps, and marks	IV	306—333	146—155
Proprietor's allowance and education	V	339—340	155—156
Index			i—v

INTRODUCTION.

AN introduction to a Settlement Completion Report seems rather inappropriate, but one is considered desirable to be written for the present one, the size of which has become somewhat large. This Report has been written both from settlement and management points of view, and with the hope that it might hereafter prove of some service to the proprietor of the estate.

The Report has been divided into five Parts, and each Part into several chapters, and its paragraphs numbered consecutively throughout. The first Part contains a general description of the estate: its situation, boundaries, and areas; its general aspect and physical features; its rivers and creeks; its roads and embankments; its forests and fisheries; its trade and manufactures; its exports and imports; its villages and markets; its population and castes; its rainfall and water-supply; its climate and dispensaries; its soil and crops; its live-stock, fodder, and fuel; and its people and their condition. The tenures and the tenure-holders have been briefly described in this Part, a fuller and comparative description of them being reserved for Part IV of the Report.

In Part II of the Report have been explained the origin of the *Raj*, the previous history of the estate and its previous settlements, including an account of the Treaty Engagement entered into by the then Raja of Kanika with the Hon'ble the East India Company on its occupation of the Province of Orissa in 1803. The rights of the different classes of the tenants and the tenure-holders of the estate, the system of collection in force at different periods, the alterations made in the rent demand of the last settlement during its currency, and the coercive measures adopted in the past for the collection of rents, have also been discussed in this Part.

Part III of the Report contains a brief account of the different stages of the present survey and settlement proceedings: of the correspondence preliminary to the present operations; of the survey operations from demarcation to record-writing; of the settlement work, including the disposal of boundary disputes, the fixing of soil classification and the procedure for attestation; of the orders and instructions received regarding rates and allowance for chain measurement, and of rules and principles in accordance with which fair rents have been recorded. The time occupied in the operations has been explained, and an account of inspections by officers also given in this Part.

In the fourth Part of the Report have been discussed the results and the costs of the settlement. The results, both in regard to area and rental, have been compared with those of the last settlement and exhibited in a series of statements. The previous management of the miscellaneous sources of the income of the estate, such as the fisheries, the pasture, the forests, the fruits, the weeds, the markets and the ferries, has very briefly been described, and the result of the present settlement by public auction has been comparatively shown. The cost of the operations has been separated for each item of work as far as it could be done.

In the fifth and last Part of the Report, some suggestions regarding the construction and maintenance of estate works, such as embankments, roads, buildings, and sluices, and some proposals for facilitating extension of cultivation in waste lands, have been made, and the present unsuitability of the estate for agricultural experiments and improvements has been briefly explained. The most important subject treated in this Part is that of maintenance of records, maps, and marks, and the Report is closed with a brief mention of the proprietor's allowance and education.

The Kanika estate lies on the sea-coast, on both sides of the estuary of Dhamra, extending 20 miles inland, and contains an area of 439·81 square miles or 281,478·40 acres, of which 103,638·75 acres are under jungles and rivers and 177,839·65 acres are included in village areas.

The estate is the property of minor Raja Nrupendra Nath Bhanj, aged 13 years, the adopted son of the late Raja Padmanabh Bhanj, who died on the 25th March 1891; and it has been under the management of Government officials since 1862, and it will so remain during the minority of the present proprietor, who will attain his majority some time in 1902.

The whole estate is deltaic. Its lower parts are covered with jungles and its upper and arable portions are subject to floods—of salt water during storms and cyclones and of fresh water during the rains. Its soil is mostly clayey and of low level, with sandy uplands few and far between. Its staple crop is *sarādh* or winter rice.

The general condition of the people is slowly improving, but is yet far from being regarded as satisfactory. The food consumed is poor, the dress worn is coarse, the dwelling houses are ill-made, and the general habits are untidy.

The survey of the estate was commenced in December 1888 and completed in June 1890. The settlement was at first in charge of Mr. Datta, who continued in this appointment for about 15 months. He left this on the 14th May 1891, and since the 3rd July of that year I have had the conduct of the settlement operations in my hand.

The settlement of the whole estate, containing 281,478·40 acres, has taken over three years to complete—one year being devoted to attestation, during the course of which 11,545 disputes and objections were settled and old area and rental for holdings entered; one year to assessment, in the course of which fair rents for 30,980 holdings were recorded and the signature of tenants on the khatians obtained; and over one year to the submission of rate reports, the preparation of *jamabandis* and other records, and other miscellaneous work, including the collection of the new rents.

The net increase in the rental from the settlement of land has been Rs. 22,585-9-3, and from that of miscellaneous sources of income Rs. 10,452-5-7, and the total increase resulting from the present settlement has thus been Rs. 33,037-14-10. The cost of operations has been, for survey Rs. 71,124-2-4 and for settlement Rs. 33,742-8-5, and the total cost (including the amount of Government contribution) is Rs. 1,04,866-10-9, which gives an average of annas 5-11 per acre for the whole estate and annas 9-4 per acre for the area cadastrally surveyed. The average cost of survey alone, per acre, is annas 4 for the whole estate and annas 6-4 for the area cadastrally surveyed, and that of settlement, taken by itself, per acre, is anna 1-11 for the whole estate and annas 3 for the area cadastrally surveyed.

STATEMENTS, TABLES, AND LISTS.

	Para.	Page.
1. Showing the total area under different heads arranged according to districts and scales of survey	4	2
2. Showing the total area under different heads arranged according to Elakahs and scales of survey	7	2 & 3
3. Showing all the villages grouped under Mukas or Zillas and all the Mukas and Zillas grouped under Elakahs	9	3-6
4. Showing the important sands in the estate	12	7
5. Explaining the river system of the estate	17	9
6. Showing the wild animals found in the estate	28	12
7. Showing the birds of the estate	39	13
8. Showing the principal varieties of fish found in the estate fisheries	31 & 35	13 & 14
9. Showing for years 1875 to 1887 the amount of salt manufactured, the rate at which fuel was charged for, and the income of the estate from this source	46	16
10. Showing the important villages of the estate with population above 500 souls	46	17
11. Showing the estate markets	63	18
12. Showing the monthly rainfall for years 1889-90 to 1893-94	68	24
13. Showing the weekly rainfall for 1889-90 to 1893-94	68	25
14. Showing the monthly average temperature for head-quarters of the estate for years 1890 to 1893	69	27
15. Showing the weekly average temperature for head-quarters of the estate for years 1890 to 1893	69	27 & 28
16. Showing the classification of the total cropped area of the estate	63 & 87	30 & 33
17. Showing the different species of rice grown in the estate	97	37
18. Showing the insects and birds injurious to crops	99	37 & 38
19. Showing the principal diseases to which cattle and buffaloes are liable	106	39
20. Showing the ceremonies performed in the estate	110	40
21. Showing the prices-current in the estate during the years 1863 to 1893	130	43
22. Showing the succession list of the Rajas of this killah	126	44-45
23. Showing the rental under each tenure according to the Raja's papers and the settlement of 1843-45	121	49
24. Showing the raiyati lands sold with the permission of the Manager from 1882-83 to 1889-90	160	57
25. Showing the price per acre for raiyati lands sold and the proportion which it bears to rent	161	58
26. Showing the Tunki lands sold with the permission of the Manager during the years 1882-83 to 1889-90	163	59
27. Showing all the abatements and reductions made in the rent demand during the currency of the last settlement	169	57
28. Showing the additions made to the rent demand during the currency of the last settlement	170	58
29. Showing the amount of remission of rent granted during the currency of the last settlement	173	59
30. Showing the net rental from 1865 to date	174	71
31. Showing the number of persons the estate had to deal with during the currency of the last settlement	177	72
32. Showing the number of certificates issued from 1879-80 to 1893-93	178	73 & 75
33. Showing the present sanctioned and the old rates	219	91
34. Showing the present rates compared with those found prevailing in the adjoining estates about 1865	220	92
35. Showing the total area and rental and the average rate of rent or <i>thani</i> and <i>pahi</i> holdings of the estate for the past four settlements and according to Raja Benayak Khanj's papers	231	93
36. Showing the complete records of the present settlement	232	100 & 101
37. Showing the papers classified into A and C	233	101 & 103

	Para.	Page.
38. Showing the total area of the estate under different heads according to past and present settlements	249	116
39. Showing the details of unoccupied land but included in villages both for present and past settlements	250	116
40. Showing the comparative details of occupied land	251	117
41. Showing the comparative details of area and rental held by the Rami	257	118
42. Showing the comparative details of area and rental of land held by permanent tenure-holders	258	119
43. Showing the details of land held by raiyats under proprietary tenure-holders	260	119
44. Showing the details of land held by the holders of jungle reclamation leases	261	120
45. Showing the comparative details of area and rental for land held by the servants of the estate	262	120
46. Showing the comparative details of area and rental for land held by the superior servants of the Raja	262	120
47. Showing the comparative details of area and rental of land held by the private servants of the Raja	263	121
48. Showing the comparative details of area and rental of land held by village servants	263	121
49. Showing the comparative details of area and rental of land held by the raiyats of the estate	264	121
50. Showing the income of the estate, past and present, from fisheries	268	122
51. Ditto ditto ditto pasture	269	124
52. Ditto ditto ditto forests	270	126
53. Ditto ditto ditto fruits	271	126
54. Ditto ditto ditto woods	272	126
55. Ditto ditto ditto honey and wax	273	126
56. Ditto ditto ditto markets	274	127
57. Ditto ditto ditto ferries	275	127
58. Showing the details of alluvions or <i>palandas</i> settled by public auction	276	128
59. Showing the total area and income of the estate from all sources for past and present settlements	278	129
60. Showing the different causes to which the present increase in rental from land settlement is due	280	131
61. Showing the cost of survey as paid by the estate from time to time	281	131
62. Showing the details of cost of survey	282	132
63. Showing the details of amount spent by Mr. Datta	283	132
64. Showing the details of cost of settlement from 15th May 1891 to 31st March 1894	284	133
65. Showing the details of work remaining to be done on the 31st March 1894 and of costs to be incurred to close up settlement operations	285	133—134
66. Showing the <i>bundhs</i> already constructed and those wanted	291	137
67. Showing the roads wanted in the estate	293	138—139
68. Showing the details of waste or unassessed lands in the estate	298	141
69. Showing the area of jungles included in villages settled since the close of settlement	300	142
70. Showing the details of area and rental of lands in jungle blocks settled since completion of settlement	303	144

LIST OF FORMS.

	Para.	Page.
Kabuliyat executed by Mustajirs in 1870	161	62
Ditto ditto 1874	161	62
Ditto ditto 1882	162	63
Khasra	168	77
Khatian	190	78
Rate statement	214	89
Assessment terij	222	94
Comparative jamabandi ekpadya	230	99
Milan khasra	232	100
Statistical form	232	100
Totals of khasra pages	232	100
Statement of crops	232	100
Terij of cultivators	232	100
Terij of under-tenants and mortgagees	232	100
Detailed jamabandi ekpadya or rent-roll	232	100
Hukumnama	232	100
Register No. 2 showing the preliminary proceedings regarding settlement of new lands included in village areas	200	142
Kabuliyat to be executed by the lessees of jungle blocks	202	144
Register No. 3 showing transfers by sale, gift, partition, or inheritance	214	147
Notice of dakhil-kharij (sale of lands)	215	148
Register No. 4 showing the lands abandoned, relinquished, or washed away	226	150
Register No. 5 showing the settlement of waste, abandoned, relinquished, and alluvial lands	231	151
Register No. 6 showing the lands occupied for public works	232	152
Register No. 26 of settlements	233	152
Register No. 1 of discrepancies	237	154
Register showing the position and state of survey marks	238	155

THE
COMPLETION REPORT
OF
SURVEY AND SETTLEMENT
FOR
KANJIKA WARD'S ESTATE
(DISTRICT CUTTACK).
SEASONS 1889-94.

Part I.
General Description.

CHAPTER I.

SITUATION, BOUNDARIES AND AREAS.

THE Kanika estate is situated along the sea-coast, on both sides of the
Situation.
estuary of Dhamra, extending about 20 miles inland, and lies between the parallels of latitude

N. $\frac{20^{\circ}29'40''}{20^{\circ}28'30''}$ and longitude E. $\frac{86^{\circ}41'40''}{87^{\circ}03'30''}$.

2. It is bounded on the—

Boundaries.

North—By the parganas of Ankura and Bhera, of district Balasore;
South—By the Bay of Bengal and the killah of Kujang;
East—By the Bay of Bengal; and on the
West—By the parganas of Utikon and Damarpur, the killah of Aul, and the pargana of Kyema, of district Cuttack, and by those of Bayang, Kyema and Kismut-Kyema, of district Balasore.

3. It is separated from—

How separated from adjoining estates.

the pargana of Ankura, partly by the Matai river and partly by a creek, the lower half of which is tidal and the upper half dry;
that of Bhera, partly by the Matai river and partly by waste lands and field ridges;
that of Bayang, partly by the Salandi creek and partly by field partitions and waste lands;
those of Kyema and Kismut-Kyema, of district Balasore, partly by the river Baitarni and partly by the Haripur creek, waste lands and field partitions;
that of Kyema, of district Cuttack, by the Ganja creek and field partitions;
the killah of Aul, mainly by the rivers Kharsoca and Brahmani, and partly by the Kholamahara creek, sandy wastes and field ridges; the pargana of Damarpur, by the Galia creek;
that of Utikon, partly by the *Sana* and the *Santra* creeks, partly by waste lands and partly by the remains of an old *bundh* made as a relief work in the famine of 1866; and from the killah of Kujang by the Tiarkot and the Chakra creeks.

PART I.
CHAP. II.

4. Its total area, as ascertained by the present survey, is 439·81 square miles. It lies partly in district Balasore and partly in district Cuttack, the rivers Baitarni and Dhamra forming the boundary between the two districts. But it is entirely borne on the register of revenue-paying estates under tauzi No. 21* in the Cuttack Collectorate. The following table shows its total area under different heads, arranged according to districts and scales of survey:—

DISTRICT.	AREA CADASTRAALLY SURVEYED IN ACRES TO SCALE 16 INCHES TO A MILE.						AREA SURVEYED IN ACRES TO SCALE 4 INCHES TO A MILE.			TOTAL AREA—		REMARKS.
	Cultivated or otherwise occupied.	Cultivable.	Other descriptions of land, such as roads, grazing grounds, buildings, &c.	Rivers.	Jungles.	Total.	Rivers.	Jungles blocks.	Total.	In acres.	In square miles.	
1	2	3	4	5	6	7	8	9	10	11	12	13
Balasore ...	60,306·05	3,073·05	16,949·34	3,143·09	7,805·46	90,373·55	6,352·60	15,395·65	21,650·45	111,923·20	174·68	
Cuttack ...	67,824·34	460·67	16,715·31	6,603·07	4,331·14	96,854·77	.....	72,700·46	72,700·43	169,555·20	264·93	
Total ...	128,221·33	3,533·72	32,664·65	10,746·16	12,136·60	187,127·32	6,352·60	87,996·06	94,351·06	281,478·40	439·81	

5. The area shown in column 2 under "Cultivated or otherwise occupied" has been surveyed under 160,545 khasra or field numbers, and is contained in 30,980 holdings, the average size of each khasra or field number being ·81 of an acre and that of each holding 4·13 acres. Each field of one class included in a single holding and contained within one continuous boundary, has been separately numbered, and each holding, on an average, contains 5 khasra numbers. The division of fields into plots, locally called *kittas*, has also been surveyed and shown in maps, and their approximate number is 330,000.

CHAPTER II.

PHYSICAL FEATURES.

6. The whole estate is deltaic. Its lower parts, close to the sea-coast, consist of low, marshy and dense jungles, which become thinner and taller as they recede from the sea. Higher up are arable plains, the lower portions of which are subject to salt-water floods during storms and cyclones, the upper portions to inundation from freshets during rains, and, except some uplands and sandy table-lands, no portion can be said to be exempt from either floods altogether. It resembles the Bengal Sunderbans as regards its formation, swamps and jungles; is much intersected by innumerable creeks; its large rivers in the hot months are brackish; its soil is charged more or less with salt, and the general appearance of the country, in cultivated and arable parts, is that of a reclaimed marsh.

Main divisions of the estate with details of areas under each.

7. The estate is divided into four main divisions, locally called Elakahs, and may be called parganas, and they are—

(1) Panchmuka. | (2) Ohhamuka. | (3) Kerara. | (4) Kaladwip.

The first Elakah lies in the district of Balasore, the subdivision of Bhadrak, and the others in the district of Cuttack, the subdivision of Kendrapara.

* In 1862, when the estate was taken under Government management, it was heavily involved in debts, to pay off which some portions of it were proposed to be sold, and it was accordingly partitioned into eight separate estates. No sale, however, took place, but the estate continues to be borne on the register under eight tauzi numbers as shown below:—

Number on the roll.	Name of estate.	Government revenue.	Number on the roll.	Name of estate.	Government
		Ra. A. P.			Ra. A. P.
21	Chhamuka ... District	12,341 \$ 7	2895	Kangardih ...	2,532 7
	Kerara ... District		2896	Charidia ...	368 15
	Kaladwip ... District		2897	Jachpur ...	1,532 11
	Jagolia ... District		2898	Pohapur ... District	1,008 8
	Sakawati ... District			Baharpat ... Balasore.	657 3
				Namony ...	417 12 11
				Ghantawar ...	1,555 10 10

GENERAL DESCRIPTION.

The following statement shows its total area under different heads, arranged according to Elakhs and scales of survey:—

PART I
CHAP. I

NAME OF ELAKH.	AREA SURVEYED TO SCALE 6 INCHES TO A MILE.			AREA SURVEYED TO SCALE 16 INCHES TO A MILE.						GRAND TOTAL.	REMARKS.
	Jungles.	Rivers.	Total.	Jungles.	Rivers.	Other descriptions of Banjarhar lands.	Cultivated or otherwise occupied.	Cultivable.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12
Panchmuka ...	15,222'95	6,322'00	21,544'95	7,600'40	2,145'00	15,245'40	20,395'40	3,075'00	20,370'40	111,222'30	
Chhamuka ...	34,991'93	.....	34,991'93	1,614'30	7,070'35	4,965'65	20,412'15	122'41	21,534'56	78,116'30	
Kerara ...	484'01	.....	484'01	3,232'30	1,122'32	5,799'62	24,404'31	142'37	24,546'68	24,404'30	
Kaladwip ...	37,274'49	.....	37,274'49	422'20	241'04	5,092'24	9,912'23	122'40	17,073'91	54,960'40	
Total ...	57,692'08	6,322'00	64,014'08	12,869'20	10,748'76	25,344'49	126,221'31	3,339'08	127,127'39	221,679'40	

3. The jungles in column 2 include open meadows, sandy plateaus, swampy jhils, and such of the creeks as have not been surveyed separately or included in the village areas. Those of Panchmuka, lying on the left bank of the estuary of Dhamra and on the island of Kalibhanj, are dense with sandy stretches and open lawns interspersed; those on the banks of the Matai are close and dwarfish, and those on the right bank of the Dhamra are sparse. The jungles of Chhamuka lie between the Dhamra river and the Mypara and the Patsal rivers, and cover an area of 34,991'93 acres, and, like those of Panchmuka, contain a number of open lawns and sands. A portion of them, called "Bhitar Kanika," which is separated from the rest by the Gokhani and the Patsal creeks, is of some importance. In these jungles, it is stated, some of the former Rajas used to conceal themselves when pursued by the Moghuls, the Mahrattas, or the Rajas of Orissa. There is a Hindu *thakur* or idol here, known as "Naik Babu," and a *Mahadev* for whom a pukka *mandir* has been built. There are mango, cocoanut and other trees, tanks and beautiful lawns. The place is now a wilderness, only traces are found of its having some time been kept up. Towards the sea-coast in the east, on the right bank of the Mundha creek, there is a meadow of immense size called *Ranganji*. It was at one time cultivated, and two villages in it, *Garat* and *Mundha*, were inhabited, but it has long since been out of cultivation. All along the coast-line beyond the jungles, both of Panchmuka and Chhamuka, fresh sandy beaches are in course of formation. The jungles of Kerara Elakah are only a few hundred acres, but those of Kaladwip cover a large area of 37,274'49 acres, and are intersected by numerous creeks.

9. Of the area surveyed cadastrally to the scale 16 inches to a mile, a portion of the river area has been surveyed separately, which is shown in column 6 above, and the area under jungle in column 5 is all included in the village areas. A description of the rivers shown in columns 3 and 6 is reserved for another chapter, and, excluding the river area from the total area surveyed cadastrally and shown in column 10, the rest is included in the village areas. There are 636 villages in the estate, of which 629 were surveyed by the survey party and 7 have since been formed out of jungle blocks and surveyed during the course of settlement. These 636 villages contain a total area of 177,839'65 acres, and are grouped under Mukas or Zillas included in each of the four Elakhs mentioned above—Elakah Panchmuka comprising 9 Mukas, Elakah, Chhamuka, 8 Mukas, Elakah Kerara, 11 Zillas, and Elakah Kaladwip, 5 Zillas. In the following tables are shown Mukas or Zillas with areas grouped under each Elakah and villages grouped under each Muka or Zilla:—*

Elakah Panchmuka.

Name of Muka.	Area.	Names of Villages.
1	2	3
1. Nangous ...	• 2,222'21	1. Nongoun (i), 2. Jansujori (i), 3. Nongouni (i), 4. Dian Banarisa (i), 5. Kandaragaria (i), 6. Rajnagar (i), 7. Tabhi (i), 8. Kankaradarh (s), 9. Alal (s), 10. Chandpur (s), and 11. Nilkanthapur (i).

* Mukas and Zilla boundaries having not been shown in the map, a complete list of the villages of the estate has had to be given in the report.

PART I.
CHAP. II.*Etakab Panchmuka—concluded.*

Name of Muka.	Area.	Names of Villages.
1	2	3
	Acres.	
2. Baharpal ...	4,068-88	1. Noogaon (i), 2. Kherang (i), 3. Baharpal (i), 4. Charitaraf (i), 5. Darapur (i), 6. Sapanbindha (i), 7. Santrapur (i), 8. Lakshmi-prasad (i), and 9. Kharitan (i).
3. Palaspur ...	7,963-43	1. Balvadrappurassan (i), 2. Chamakhand (i), 3. Matto (i), 4. Malbarh (i), 5. Pratappur (i), 6. Sana-itagoth (i), 7. Bara-itagoth (i), 8. Nal-goonda (i), 9. Ittooa (i), 10. Palaspur (i), 11. Sasubhnasuni (i), 12. Kaupuni (u), 13. Talabandh (i), 14. Anugrahapur (i), 15. Chhatrapada (i), and 16. Rampur (i).
4. Ghanteswar ...	18,540-55	1. Anantapur (i), 2. Amritpur (i), 3. Kesharpur (i), 4. Kesharpur Dian (u), 5. Gopinathpur (i), 6. Gopinathpur Dian (u), 7. Hari-chandanpur (i), 8. Harichandanpur Dian (u), 9. Balidandi (i), 10. Balidandi Dian (u), 11. Haldia (i), 12. Haldia Dian (u), 13. Barada (i), 14. Nachhibindha (i), 15. Gurudaspur (i), 16. Karari-pal (i), 17. Kainfullia (u), 18. Narendrapur (i), 19. Ohhatrapada (i), 20. Adhan (i), 21. Balipada (i), 22. Bajrapur (i), 23. Rajgurupur (i), 24. Koliaria (i), 25. Koliaria Dian (u), 26. Arasi Koliaria (u), 27. Biraria (i), 28. Totapara (i), 29. Gangadharpurpatna (i), 30. Manipur (i), 31. Noosahi (i), 32. Ghanteswar (i), 33. Bandiarisahi (i), 34. Ankpara (i), 35. Gararpur (i), 36. Khakarakhola (u), 37. Andhiapat (i), 38. Raipur (i), 39. Brahmatikri (i), 40. Sendhgara (i), 41. Arasi Sendhgara (u), 42. Gachharia (i), 43. Baliapal (i), 44. Taraf Raipur (i), 45. Bhimpur (i), 46. Khadarpokheri (i), 47. Sunaripokheri (i), 48. Kholanali (u), 49. Bijipur (i), 50. Noogaon (i), 51. Hattapur (i), 52. Jantuali (i), 53. Sadanandapur (u), and 54. Bishwanathpur (u).
5. Jasipur ...	10,968-71	1. Jaleswarpur (i), 2. Farsibandh (i), 3. Mousudha (i), 4. Gouruni-pokheri (i), 5. Balvadrappasad (i), 6. Haripur (i), 7. Paramanandpur (i), 8. Barhakolha (i), 9. Balasahi (i), 10. Bilangpur (u), 11. Jasipur (i), 12. Noogaon-Ichhapur (i), 13. Kudakanthi (i), 14. Karan-pokheri (i), 15. Subudhia (i), 16. Junuda (i), 17. Nalgohira (i), and 18. Saralpatia (u).
6. Kangardih ...	16,622-16	1. Bohu (i), 2. Singhti (i), 3. Biswali (i), 4. Nalitagaria (i), 5. Utkura (i), 6. Ramkrishnapur (i), 7. Pangura (i), 8. Pangura Dian 1st (u), 9. Pangura Dian 2nd (u), 10. Mriganayani (i), 11. Sendh-gara (u), 12. Jenapur (i), 13. Kaliapat (i), 14. Begunia (i), 15. Ichhapur (i), 16. Sarna (i), 17. Govindpur (i), 18. Chand-kura (i), 19. Tentulida (i), 20. Tentulida Dian (u), 21. Kangardih (i), 22. Orasahi (i), 23. Baghnata (i), 24. Kasturikon (i), 25. Durga-pur (i), 26. Lakshmi-prasad Dian (u), 27. Neruali (i), 28. Jogi-pokheri (i), 29. Balikuri (i), 30. Bentalpur (i), 31. Kowriapal (i), 32. Kandha (i), 33. Biserampur (i), 34. Madhupur (i), 35. Bejoynagar (i), 36. Amligaon (i), 37. Pokherisahi (i), 38. Singharewar (u), 39. Sana-haripur (i), 40. Bara-haripur (i), 41. Paikerapur (i), 42. Kusum (i), 43. Majhigaon (i), 44. Pithiasendh (i), 45. Kismut (i), 46. Deuli-gaon (i), 47. Chalunia (i), and 48. Burujal (i).
7. Ohardia ...	6,824-02	1. Pokherisahi (i), 2. Noogaon (i), 3. Dasarathipur (i), 4. Baghdian (i), 5. Kuanrikanthi (i), 6. Bararupa (i), 7. Gauradeipur (i), 8. Jaladharpur (i), 9. Ohardia (i), 10. Dhruvapahali (u), 11. Banchhanidpur (u), 12. Harokrishnapur (u), 13. Bara-tilanchi (u), and 14. Sana-tilanchi (u).
8. Jagoola ...	7,399-34	1. Bansara (i), 2. Chherak (i), 3. Tentuli-aria (i), 4. Niachintpur (u), 5. Gangadharpur (u), 6. Bijipur (u), 7. Noogaon (u), 8. Guanto (i), 9. Banooasahi (u), 10. Sankhori (u), 11. Govindpur (i), 12. Narsinhapur (i), 13. Narsinhapur Dian (u), 14. Jagannathprasad (u), 15. Jagoola (i), 16. Paikahi (u), 17. Khamarsahi (u), 18. Dakshin-dhamra (i), 19. Balvadrappasad (u), 20. Narsinhprasad (u), 21. Jharpara (u), and 22. Jharkala (u).
9. Saraswati ...	19,323-92	1. Baliarpur (u), 2. Lakshmi-prasad (u), 3. Kaithakolha (u), 4. Sas-hikadeipur (u), 5. Bajarapur (u), 6. Karanjmal (u), 7. Saraswati (u), 8. Tentulipokheri (u), 9. Bainchua (u), 10. Kusunpur (u), 11. Dhankuta (u), 12. Bhencha (u), 13. Guansole (u), 14. Nachhipur (i), 15. Dadhibanpur (u), 16. Kalibindha (u), 17. Uttarsahi (i), 18. Kamalpada (u), 19. Dhirasahi (u), 20. Fatehpur (u), 21. Janaka-deipur (u), 22. Naikulasahi (i), 23. Panchtikri (i), 24. Khamar-sahi (i), 25. Bajarapur (u), 26. Kusmara (u), 27. Anandapur (u), 28. Bara-samukabheri (u), 29. Garakolha (u), 30. Sana-samukabheri (i), 31. Belighai (u), 32. Karanpalli (u), 33. Bheji-aria (i), 34. Kadua-nad (i), 35. Bhanupur (u), 36. Pakarpur (u), 37. Bara-ool (u), 38. Chandrasikharpur (u), 39. Sana-pipla (u), 40. Bejoypatna (u), 41. Bara-pipla (u), 42. Gopinathpur (u), 43. Baghakolha (u), 44. Kantabania (u), 45. Narendrapur (u), 46. Mohulia (u), and 47. Mantapara (u).

*Elakah Chhemuka.*PART I.
CHAP. II.

Name of Zilla.	Area.	Names of Villages.
1	2	3
1. Ganja	Acres. 2,789-53	1. Ganja (i), 2. Gokarneswar (i), 3. Govindpur (i), 4. Cherantpara (i), 5. Bajrapokheri (i), 6. Chhadesh (i), 7. Baghbada (i), 8. Bara-tayla (i), and 9. Sana-tayla (u).
2. Aria	4,788-43	1. Kothsahi (i), 2. Kalikapur (i), 3. Gangadharpur (i), 4. Baragar (i), 5. Kantpara (u), 6. Aras (i), 7. Barada (i), 8. Mohurigaon (i), 9. Ostia (i), 10. Taras (i), 11. Baghuasuni (u), 12. Sealia (i), 13. Akhulipara (i), 14. Pimpuri (i), 15. Porol (i), 16. Nahulia (i), 17. Nandimahara (i), 18. Pandiapalli (i), 19. Chalanis (i), 20. Matia (i), 21. Gulhalsahi (i), 22. Gira (i), 23. Orgira (i), 24. Bansaria (i), 25. Gobang (i), and 26. Dalikaenda (i).
3. Bararia	3,080-23	1. Madhupara (i), 2. Mantpara (i), 3. Khanpara (i), 4. Hariharpur-sasan (i), 5. Kuhuri (i), 6. Banmahuri (i), 7. Bararia (i), 8. Sikuri (i), 9. Deuli (i), 10. Barang (i), 11. Burudia (i), 12. Gualigaon (i), 13. Bangarkuan (i) and 14. Kantaria.
4. Ayeton	5,114-07	1. Kalispara (i), 2. Bartani (i), 3. Kantpara (i), 4. Sinoa (i), 5. Jorol (i), 6. Meghapur (i), 7. Tentulikalhi (i), 8. Bhogra (i), 9. Rautbar-tani (i), 10. Mahadei-aria (i), 11. Gangadharprasad Dian (i), 12. Noadia (u), 13. Ayeton (i), 14. Siko (i), 15. Bādāraja (i), 16. Korund (i), 17. Malishāra (i).
5. Singhri	5,362-63	1. Govindkan (i), 2. Khulari (i), 3. Khandeta (i), 4. Pandarkoli (i), 5. Singhri (i), 6. Katna (i), 7. Bania (i), 8. Bajpur (i), 9. Joykunda (i), 10. Pattarpur (i), 11. Biraria (i), 12. Dahangiri (i), 13. Dhamra (i), 14. Jharmal (i), 15. Noogaon (i), 16. Madrangapat (i), 17. Gararpur (i), 18. Biewanathpur (i), 19. Charipokheria (i), 20. Bendhamal (i), 21. Ghumria (i), 22. Gharbhanjakolha (i), 23. Gajaraipur (i), 24. Koilipur (i), 25. Mallipur (i), and 26. Char-haigola (i).
6. Bajarpur	5,882-05	1. Upulai (i), 2. Tanaipada (i), 3. Barapank (i), 4. Roulia (i), 5. Kuji-pur (i), 6. Trailokyapur (i), 7. Itapokheri (i), 8. Sangrampur (i), 9. Kantipokheri (i), 10. Noopokheri (i), 11. Tarpada (i), 12. Khunta (i), 13. Chancherisahi (i), 14. Bajarpur (i), 15. Joynagar (i), 16. Kusunpur (i), 17. Balvadrprasad Dian (u), 18. Noogaon (i), 19. Endlapur (i), 20. Anantapur (i), 21. Anguri (u), 22. Bajarpur Dian (u), 23. Ishwarpur (i), and 24. Jagannathprasad Dian (u).
7. Ghariyamal	6,818-08	1. Ramchandrapur (u), 2. Daruora (i), 3. Balarampur (i), 4. Khamar-sahi (i), 5. Ghariyamal (i), 6. Noogaon (i), 7. Jungari (i), 8. Pad-manabhpur (i), 9. Panchupalli (i), 10. Taynlakolha (i), 11. Bani-pokheri (u), 12. Silapokheri (i), 13. Madhupur (i), 14. Nooakhunta (i), 15. Balvadrapur (i), 16. Jonenagar (u), 17. Purusottampur (u), 18. Basuakolha (u), 19. Rajnagar-Bajoynagar (u), 20. Gokhani (u), 21. Pitanda (u), 22. Dighi (i), 23. Righagarh (i), 24. Paramananda-pur (u), and 25. Ishwarpur (i).
8. Dangmal	2,389-72	1. Nalitapatia (i), 2. Bara-tayla (u), 3. Khamarsahi (i), 4. Dangmal (i), 5. Pinohhapatia (u), 6. Bara-aria (i), 7. Saradāprasad (u), 8. Kamal-pur (u), 9. Govindpur (u), and 10. Noogaon (i).

Elakah Kerara.

1. Naldia	Acres. 964-88	1. Ostia (i), 2. Nagarh (i), 3. Naldia (i), and 4. Katkana (i).
2. Charidesh	1,552-36	1. Senthpara (i), 2. Tangantaila (i), 3. Govindpur (i), 4. FiriEdandi (i), 5. Dakshindandi (u), 6. Chakibank (i), and 7. Aloopus (i).
3. Noorgaon	1,549-71	1. Noorgaon (i), 2. Kiajori (i), 3. Sanabaragopalpur (i), 4. Gosingha (i), 5. Garjanpur (i), 6. Jagannathpur (i), and 7. Tamulia (u).
4. Belikana	4,042-91	1. Belpal (i), 2. Belpal Dian (u), 3. Balikona (i), 4. Bhaghanpur (i), 5. Jagannathpur-sasan (i), 6. Bandhpatta (i), 7. Sana-olra (i), 8. Bara-olra (i), 9. Kolidihi (i), 10. Knailo (i), 11. Bhatpara (i), 12. Anga-roca (i), 13. Khandaipara (i), 14. Kalpara (i), 15. Kalparadih (u), 16. Madhiyapara (i), 17. Bandhpura (i), and 18. Kandia (i).
5. Rajpur	1,467-02	1. Rajpur (i), 2. Chandanpur (i), 3. Balvadrprasad (i), 4. Madhupur (i), and 5. Manikhandi (u).
6. Garberhi	2,140-25	1. Koraragarh (i), 2. Panchoswar (u), 3. Balishipatna (i), 4. Matia (i), 5. Champadia (i), 6. Padani (i), 7. Ghoraparia (i), 8. Madanga (i), 9. Dhundia (i), 10. Pokheria (i), and 11. Bardia (i).
7. Bargaon	2,081-99	1. Lokanathprasad (i), 2. Dhoinara (i), 3. Kusunpur (i), 4. Ram-chandrapur (i), 5. Jaduchandrapur (i), 6. Jharkata (i), 7. Berhuan-kolha (i), 8. Nahuni (u), 9. Noogaon (i), 10. Gopinathpur (i), 11. Waddihi (i), 12. Ichhapur (i), 13. Dakshinbhara (i), 14. Jaula (i), and 15. Mangalpur (i).

PART I.
CHAP. II.*Elakah Kerara—concluded.*

Name of Zilla.	Area.	Names of Villages.
1	2	3
8. Satgaon ...	Acres. 8,274-96	1. Chandi-Bansaul (i), 2. Peta (i), 3. Bahargarh (i), 4. Bhedia (i), 5. Guhalkani (i), 6. Paschimphera (i), 7. Lakshminarayapur (i), 8. Bishnupara (i), 9. Charipokheria (i), 10. Amba-ora (u), 11. Sila-pokheri (u), 12. Handiagarh (u), 13. Kendukolha (u), 14. Babipur (u), 15. Beamesnagar (u), 16. Naljori (i), 17. Padmanabhpur (u), 18. Arjunpur (u), 19. Chapmanpur (u), 20. Dibakarpur (i), 21. Balarampur (i), 22. Iswarpur (i), 23. Noogaon (i), 24. Tulashipur (i), 25. Barhinakolha (i), 26. Brahmanikolha (i), 27. Bhittargarh (i), 28. Dudhia (i), 29. Bansani (i), 30. Kandira (i), 31. Khuntakon (u), 32. Hansooa (i), 33. Nethuria (i), 34. Baruna (i), 35. Amnapari (i), 36. Madhupur (i), 37. Jagannathpur (i), 38. Hansina (i), 39. Gothkolha (u), 40. Sujanpur (u), and 41. Ugalsendh (u).
9. Kurunti ...	5,882-40	1. Khamarsahi (i), 2. Manpura (i), 3. Pokheria (i), 4. Jhinkiria (i), 5. Nathapur (i), 6. Kurunti (i), 7. Dhagooa (i), 8. Tiyar (i), 9. Chakradharpur (i), 10. Hatina (i), 11. Dera (i), 12. Paripangra (i), 13. Mugakani (i), 14. Nodhasasant (i), 15. Brahmapurassan (i), 16. Chandrasikhar (i), 17. Junpangra (i), 18. Maliparira (u), 19. Bhatsahi (u), 20. Sendhkani (u), 21. Noopokheri (u), 22. Gokhani (i), 23. Badhi (i), 24. Kathpangra (i), and 25. Dhobaigarh (i).
10. Mainsasoor ...	4,819-10	1. Rajnagar (i), 2. Tukunia (u), 3. Mainsasoor (i), 4. Sana-car (i), 5. Barguridanda (u), 6. Maliabuda (i), 7. Kani (i), 8. Padmapur (u), 9. Rajgarh (i), 10. Dullarpur (u), 11. Benudharpur (i), 12. Baghtayla (i), 13. Barakolha (i), 14. Jharpara (i), 15. Chardia (i), 16. Chakrabarti (i), 17. Mohulia (i), and 18. Hatiagari (i).
11. Guldia ...	2,278-11	1. Kanua (i), 2. Baghua (i), 3. Balarampur (i), 4. Mangarajpur (i), 5. Sukdehpur (u), 6. Chandipalli (i), 7. Guldia (i), 8. Tarpada (i), 9. Krishnapur (u), 10. Dhanoswarpur (i), and 11. Arakhidihi (u).

Elakah Kaladwip.

Name of Zilla.	Area.	Names of Villages.
1	2	3
1. Chardihi ...	Acres. 4,022-80	1. Tetclanga (i), 2. Bilakalupara (i), 3. Korarasahi (u), 4. Bandhasahi (u), 5. Isanipalla (i), 6. Barpalli (u), 7. Barapal (i), 8. Orpalli (u), 9. Bara-marichapali (i), 10. Sana-marichapalli (i), 11. Basantpur (i), 12. Basantpurpaina (u), 13. Inkiria (i), 14. Barunpalla (i), 15. Gankalupara (i), 16. Barhapur (i), 17. Inkiriapatna (u), 18. Taradeipur (u), 19. Chhatkhambasasikadeipur (u), 20. Dattapur (u), 21. Koilipur (i), 22. Kankdia (i), 23. Kusunpur (u), 24. Khireote (i), and 25. Bureote (i).
2. Gajarajpur ...	6,278-23	1. Gobardhanpur (i), 2. Tiyar (u), 3. Paharajpur (i), 4. Joypur (i), 5. Baranankana (i), 6. Brahmanahi (i), 7. Bhelsari (u), 8. Kanhapur (u), 9. Bandhapur (u), 10. Barakanti (u), 11. Sanakanti (u), 12. Andardia (u), 13. Akarpura (u), 14. Bindhanaukana (i), 15. Kadalichona (u), 16. Sundaripal (u), 17. Harishpur (u), 18. Singharoswar (u), 19. Tamulia (u), 20. Chakulidihi (u), 21. Baro (u), 22. Barunai (u), 23. Karanjara (u), 24. Joginath (u), and 25. Gokhipur (u).
3. Garmal ...	2,425-26	1. Penth (i), 2. Talpatta (u), 3. Prisanannapur (i), 4. Nunia (u), 5. Khandamara (i), 6. Chitounkolha (u), 7. Endlapur (i), 8. Barakuji (u), 9. Sanakuji (u), 10. Jowdia (u), 11. Bikelkani (u), and 12. Junpanga (u).
4. Gojo ...	2,378-76	1. Kaitha (i), 2. Gahmasikhar (i), 3. Chinchiri (i), 4. Kendukani (u), 5. Khandiora (u), 6. Noogaon (i), 7. Kathoogand (i), 8. Nachhipara (i), 9. Kanfulia (i), 10. Lakshmiiprasad (i), 11. Narangarh (i), 12. Gopalpur (i), 13. Hariharpur (u), 14. Baliora (u), and 15. Gadadharpur (u).
5. Satbhaya ...	2,575-87	1. Gopinathpur (i), 2. Kharikolha (i), 3. Paramanandapur (u), 4. Kanhapur (i), 5. Govindpur (i), 6. Mohanpur (i), and 7. Satbhaya (i).

10. The villages marked (i) are inhabited and those marked (u) are uninhabited. There are altogether 458 villages inhabited and 178 uninhabited. The uninhabited ones are mostly in Mukas Saraswati and Jagoola, of Elakah Panchmuka, in Mukas Dangmal and Ghariyamal, of Elakah Chhamuka, and in Zilla Satgaon of Elakah Kerara. The average size of villages for the estate is 279.62 acres. The villages of Panchmuka, Chhamuka and a few of Kerara are good-sized; those of Kaladwip are generally small, from 50 to 300 acres.

11. The entire village area consists of rice lands of low and monotonous level, relieved here and there by jungles, rivers, creeks, sands and sites. The jungles are chiefly found in the villages adjacent to jungle blocks, and consist mostly of low shrubs.

and scrubs. The creeks are all tidal and flanked by wild screw-pines, locally called *kia*. The homestead uplands are either sandy or clayey. Here and there, all over the estate, are found sands, either as long plateaus or as patches, detached or in ranges. From their position and formation there is little doubt but that they owe their origin to the action of the rivers which, even at the present time, rush down from the hills, heavily charged with sand and silt. During heavy floods sand is brought down with strong currents, and in the olden times it used probably to be very largely deposited in the beds of rivers, and in the hot months blown up and piled on their banks, and the sands now found are the remains of them. They have mostly been utilized as village sites, orchards and gardens, and in some places large areas are still left as lawns and pasture grounds. In parts of the estate, where there are no suitable sandy uplands, earthworks have been thrown up and sites artificially formed, and the banks of large tanks have also in some villages been converted into sites.

12. The sands, locally called *arias*, constitute almost the only physical feature of the estate worthy of special notice, and the principal ones are therefore mentioned, and they are—

- (1) Dakshin-Dhamra to Bansara, in Muka Jagoola, 6 miles long and 100 yards broad;
- (2) Chasakhand to Noogaon-Ichhapur, 4 miles long and 200 yards broad;
- (3) Manipur to Balliapal, 5 miles long and 400 yards broad;
- (4) Nalgohira to Subudhia, 4 miles long and 100 yards broad;
- (5) Ganja to Mahurigaon, 3 miles long and 200 yards broad;
- Cherantpara to Arsa, 2 miles long and 200 yards broad;
- Orgiria to Taras, 3 miles long and 150 yards broad;
- Nandimahara to Douli, 4 miles long and 150 yards broad; and
- Giria to Mahadei-aria, 3 miles long and 100 yards broad.

Of these 9 *arias*, the first 4 are in Elakah Panchmuka, district Balasore, and the others in Elakah Chhamuka, district Cuttack. Numbers 2, 5 and 6 are continuous, and the others are detached and separated by small, shallow valleys or intervals. *Aria* No. 1 is only a few feet higher than the level of the surrounding fields, is liable to be flooded with salt-water during severe storms and cyclones, and is not covered with trees as similar tracts elsewhere are. Number 3 is the most important tract in Elakah Panchmuka, and contains the best of topes, groves, orchards and vegetable gardens in the estate, and betel and sweet potatoes are largely grown in selected portions of it. Towards the southern extremity of *Aria* No. 4, stand the villages of Ganja and Hatsahi (Govindpur), between which and Mahurigaon there is a large, open lawn covered with green grass for the greater part of the year. The next one, No. 6, is well drained, sloping evenly on all sides, and is eminently suited for site for the proposed palace of the Raja.

In Elakah Kerara there are no long *arias* or a series of them forming chains, but there are several single and isolated patches or sandy spots utilized as village sites, such as those of the important villages of Keraragarh, Rajgarh, Rajnagar and Balikona. In Elakah Kaladwip, along the sea-coast in the south, there are sand hills, with height varying from 10 to 30 yards, and they constitute natural barriers against the inrush of sea waves, the advantage of which has been taken to clear and cultivate a strip of jungle land, and 7 villages have been formed, of which 6 are inhabited. These villages are sufficiently protected on the side of the sea, but are liable to floods from the salt-water creek on the other side, running almost parallel to the coast. This creek has been embanked to afford necessary protection to land under cultivation. The place is called, Satbhaya (7 brothers), from its containing 7 villages.

CHAPTER III.

COMMUNICATIONS.

13. There are numerous rivers and creeks in the estate, and nearly all parts of it are accessible by water; but in the absence of roads there are no facilities for internal communications. There is only one road maintained by the District Boards, viz., Cuttack to Bhadrak, which passes through the estate from Ganja to Chandbally and

District Board Road.

PART I. from Chasakhand to Santrapur. Its length from Ganja to Chandbally is
CHAP. III. miles, and from Chasakhand to Santrapur 8 miles. The former is maintained by the District Board, Cuttack, and the latter by that of Balasore. The road from Ganja to Chandbally is a kutcha road kept in tolerably good repair; but the wooden bridges near the latter place have for some years past been in a chronic state of tottering decay, and one of them has now been completely washed away. The road from Chasakhand to Santrapur, passing through Kherang, where there is a thatched inspection bungalow—the only bungalow in the estate maintained by the District Board—is also kutcha, and for the last eight years has been allowed to go out of repairs, and is not even kept up as a fair-weather one. The District Board, Balasore, practically spends almost nothing for the benefit of the estate, from which it receives Rs. 3,082 on account of cesses, and also holds two of its ferries, for one of which there appears no justification. This ferry, called *Panchtikri*, lies entirely within the estate; is not connected with any road; is only used by non-resident (*Pahi*) raiyats of Muka Saraswati, beyond which is the sea, and cannot in any sense be regarded as public. The estate pays to the District Board, Cuttack, Rs. 3,960, and the total amount which it annually pays for cesses to the two District Boards of Cuttack and Balasore amounts to Rs. 7,042, for which it gets little benefit. It cannot reasonably expect to have anything like the full amount of its contribution spent in it, but there is some ground for complaint when the main road passing through it is not maintained as it should be.

Estate roads.

14. A few village roads have recently been made at estate expense, and they are—

- (1) Ganja village road—1 mile long, with a pukka bridge over a creek;
- (2) Govindpur village road—half a mile long;
- (3) Keraragarh-Balikona road—2 miles long, made for the convenience of the people attending the market at the former place;
- (4) Hatiapara road—55 feet long, connecting two stretches of sand; and
- (5) Satbhaya road—about a mile long from the ghat to the inspection bungalow.

Those estate roads are inadequate, and the question will be discussed in the last part of this report.

15. The embankments and the *bundhs* in the estate are often used as footpaths, especially in the rains, when paddy fields are under water. In Elakahs Kerara and Kaladwip, where there are no stretches of sand or other table-lands, they are almost the only usable footpaths. The embankment from Bandhpara to Ostia and from Ostia to Angarooa is 6 miles and is used as a footpath, and so are the banks of the Hansooa creek, from Hansooa to Rajgarh. From Angarooa the creek is embanked by the estate on the right-hand side up to Koilipur, and from there the Tiarkot creek is similarly embanked. From Bandhpara to Burcoto there are the remains of an old *bundh*, and though it has long since been given up, it still continues as a road of some service. From Rajnagar the Hansooa creek is flanked on its left bank by the estate *bundh*, which runs down to village Kadalichooa, and thence along the Penth creek up to Jowdia, and from there goes round the villages of Zilla Goje to Gadadharpur. Its total length is 17 miles. In Elakah Chhamuka there is a *bundh* from Chhadash to Mahadai-aria, 9 miles long, and another from Deuli to Isswarpur, 3½ miles long; and in Elakah Panchmuka, a new *bundh*, 12 miles long, has recently been constructed from below Chandbally, following the course of the Baitarni, the Dhamra, and going part of the way up the Matai to village Tilanchi. These embankments and *bundhs* are often, at different places, cut through to let out rain-water, and in the banks of the Hansooa creek there are gaps left unfilled, and they therefore serve the purpose of roads or footpaths very indifferently.

16. The principal rivers in the estate are the Brahmani, the Kharsooa, the Baitarni and the Matai. The Brahmani, some 2 miles below its junction with the Kharsooa, divides into two branches—the main or the left-hand branch coursing on to the estuary of Dhamra, and the other branch passing on to that of Mypara. The latter, after its separation from the former, goes under the name of “Patsal,” and after running a course of some 12 miles changes its name into “Mypara,” as

Navigable rivers and creeks.

4

PART I.
CHAP. III.

River system of Kanika.

N.

Divides into two branches—one passing on the right, and the other on the left side of the Kalibharni island ...

PART I.
CHAP. III.

18. The Galia creek, with which the Brahmani meets on its entrance into the estate, is a deep creek, forming the common boundary between this estate and the pargana of Damarpur. It runs a course of some 4 miles, and is navigable for country boats. There are other creeks from the river, some of which have been noted in the table above. They are navigable at flood tide, short distances inland, and so are those of the other rivers in the estate—the Kharsooa, the Baitarni and the Matai.

19. The river Kharsooa enters the estate at village Chhadash, and some of the creeks it has formed on its left, i.e., Kanika side, have been noted in the table. Of these, the Ganja creek only passes across to the Baitarni, but there is a bar formed where the opposing tide currents meet, and is only navigable at spring tide, except in the rains, when boats pass and repass daily at flood tide.

20. The Hansooa creek is the most important creek in the estate. Its entire navigable length is 16 miles. It has been acquired by Government, by whom it was canalized in 1881 for the steamer service between Chandbally and Kendrapara. This was before the Alva extension of the Kendrapara canal was opened, and now it is only used by steamers when the canal is closed for annual repairs, and during floods, when down currents from Alva are exceptionally strong. It receives tide water from two sides—from the Brahmani in the north and the sea in the south—and the opposing currents meet at village Chandi-Bansmul, 3 miles from its junction with the Brahmani. On the right side it feeds several smaller creeks, one of which—the Tiarkot—forms the common boundary between Kujang and Kanika for about 6 miles, from Tiyar to Barapal, and is navigable for this length. From village Tiyar, the Hansooa goes down a broadened creek, and flows at ebb tide into the sea at Baro, a mile above which it joins another creek, which passes up to village Penth and beyond into jungles, and meets with the Satbhaya and the Bansgarh creeks (to be hereafter mentioned) somewhere in the dense jungles of Elakah Kaladwip.

21. The Patsal separates from the main river Brahmani at village Hansina, and after a course of $9\frac{1}{2}$ miles meets with two creeks, one of which, the Arjunpur, passes up several miles inland up to the salt-water *bundh* near Gadadharpur, and the other enters and is lost in the dense jungles of Elakah Kaladwip. Two and a half miles lower down, at village Purusottampur, the river branches off into two streams, the main stream on the right going under the name of "Mypara," and the smaller under that of "Patsal," which is also called "Bhitar Kanika Nadi." The Mypara flows on eastward, and throws up, before its fall into the sea, an important creek called "Bansgarh." This creek, two miles up its course, divides into two streams, the main stream continuing its course southward several miles inland with innumerable twists and turns, and reaching a place called "Bansgarh," which has given the name to it and which was at one time an important seat of the Rajas of Kaladwip, but is now a deserted site. The other stream, Satbhaya, runs almost parallel to the sea-coast, separating a strip of sand-hills and clayey valleys, the cultivated and inhabited portion of which is called "Satbhaya," and after rejoining with the main stream—Bansgarh—passes across country and joins with the Penth creek mentioned in paragraph 20 above. These streams far up inland are covered with overhanging branches of trees, and are therefore not navigable for their entire lengths, though at flood tide there is always sufficient water to float heavy country boats. Small and low boats, however, cross over from Penth side to Satbhaya. The Patsal or Bhitar Kanika Nadi flows southward, and after a course of 5 miles divides into two streams, the Mundha and the Gokhani creeks. The former flows eastward, some distance in jungles, and separates into two branches, one falling into the estuary of Mypara in the south, and the other into that of Dhamra in the north. The Gokhani creek passes round Bhitar Kanika jungles (described in paragraph 8 above), and after throwing up a small creek through village Righagarh to the Brahmani, joins the Patsal a mile and a half below the latter's separation from the Mypara at Purusottampur.

22. The Baitarni is next in importance to the Brahmani, with which it joins by two mouths, at villages Nooagaon and Durgapur. It runs a course of 10 miles in the estate, entering it at village Tayia, and for over 2 miles, runs between this and pargana Kyema, the latter including a strip of riverside land now constituting the Chandbally port, and the rest of its course lies entirely within the estate.

23. The united waters of the Brahmani, the Kharsooa and the Baitarni form a fine and broad river, which goes under the name of "Dhamra." A mile below Durgapur the Dhamra meets with the *Galia Nadi* on the left side. This creek is navigable for about seven miles up to Kuanrikanthi. Lower down a large island, called "Kalibhanj," five miles long and half a mile broad, is formed, which divides it into two channels, through both of which it discharges its water into the sea. The left-hand side channel is very deep, and is marked by buoys and beacons for the passage of steamers. Six miles from the estuary is Shortt's Island, where a light-house has been erected since 1888.

24. At village Dakshin-Dhamra, the Dhamra receives an important tributary, the Matai, which is deep and navigable for its entire course of 21 miles in the estate, which it enters at Nooagaon, and after 5 miles of its course, runs almost parallel to the sea-coast, separating the two Mukas, Saraswati and Jagoola, from the rest of the estate. It meets and feeds several creeks, some of which have been shown in the table above, and one of them, the Teradowria, is of some importance, being navigable for 10 miles inland up to Khorang, where, as already mentioned, there is a District Board inspection bungalow.

25. Besides the District Board and estate roads, embankments and *bundhs*, rivers and creeks—the last only navigable at flood tide—there are stretches of sand, mentioned in paragraph 12 above, which are also utilized as means of communication, especially during the rains. The *bundhs*, however, are not suitable for cart traffic; sandy stretches are isolated; estate village roads are few at present, and District Board roads are seldom in proper repair; and carts are therefore comparatively few, being 817 in the whole estate. There is not a single cart in the two southern Elakahs of Kerara and Kaladwip, and only a few in Chhamuka, where some of them are more like sledges than carts, being vehicles without wheels and dragged over sand. In Elakah Panchmuka, chiefly in Muka Ghanteswar, where sandy plateaus are both wide and long, there are regular carts which are regularly used during the dry months, when, with field partitions cut through, temporary cart tracks are made.

26. There are, as shown above, broad rivers and deep creeks, and to cross them several forries have been established. Those for the Brahmani are at villages Naldia, Bandhamal, Righagarh and Nalitapatia; those for the Kharsooa are two at Ganja—one held by the Cuttack District Board, and the other, over the creek, by the estate; those for the Baitarni are at village Gualigaon (across Chandbally), held by the District Board, Cuttack, and at Tanaipada, recently opened by the estate; those for the Matai are at Baliapal, Panchtikri (these two are held by the Balasore District Board), Jantuali, Tilanchi and Narsinhapur, above Dakshin-Dhamra; and those for the Hansooa creek are at Ghoraparia and Rajnagar. The last two ferries are free, ferrymen having been allowed land grants. For the Teradowria creek there is one ferry at Narendrapur, and for the Patsal, one at Hansina. At Penth there is a free ferry maintained for the Satbhaya people, who, to avoid dense jungles, come long distances along the sea-coast and cross over at this village.

CHAPTER IV.

FORESTS, FISHERIES AND THEIR PRODUCTS.

27. As shown in Chapters I and II, the area under rivers and jungles is considerable, the jungle area being 100,055·70 acres and the river area 17,100·70 acres; and the forests and the fisheries of the estate and their products are therefore of some importance, though not so much as their extent might

PART I.
CHAP. IV.

suggest. The forests contain no good timber, but furnish materials for the construction of the poor huts of the raiyats. Dwarf date-palms, locally called *hentals*, are found in plenty, and they alone supply nearly all the materials which tenants, living near about jungles, require for house-making: their stems or trunks do duty for bamboos, wooden rafters and pegs; their leaves supply thatching straw, and their fibres furnish twine. *Sundari* trees, also found in abundance, furnish masts, rudders and oars for country boats; wooden parts of native ploughs; beams, posts and rafters for huts; and their trunks, scooped out into troughs, serve as water-lifts. There are other trees and shrubs which are also useful, some as yielding wood for water-lifts, pestles (*dhenkis*), the different parts of ploughs, posts and rafters; some as yielding edible fruits of various tastes between sour and sweet; some as furnishing twine of varying strength; some as yielding reddish, astringent juice for dyeing fishing nets and twine; some as yielding a kind of oil which is applied to the exposed parts of the body by the raiyats working in jungle tracts as protection against leeches and insects; and some as possessing medicinal properties, the fruits, the leaves (*nux vomica*) and the roots of which are medicinally used by the local kabirajes. There are also reeds, weeds and grasses found in abundance, some of which are employed in making baskets and mats and in caning chairs (cane) and most of them are utilized as twine. Grasses (*juno*) are used for thatching huts. There is only one kind of tree in the jungles, locally called *habali*, the timber of which is tolerably good and might be used for making furniture, but its supply is limited.

28. Besides living plants and trees, the forests also abound in wild animals.

Wild animals.

Deer are found in herds in the jungles of Chandnipal, Kalibhanj Island, Mundha and Kaladwip, where tigers also have their homes, and are sometimes seen in dense jungles along the creeks covered over with branches of bushy trees. Wild pigs are numerous, and commit a lot of damage to crops in the neighbourhood of jungles, and the cultivators have to keep watch night and day. Monkeys are seen in large numbers in the jungles of Bhitarkanika and of Kaladwip, but they seldom come up to arable parts. Weasels, otters, jackals and foxes are all found in coppices in inhabited tracts. The following is a list of wild animals found in the estate:—

No.	Local Name.	English Name.	REMARKS.
1	2	3	4
1	Hanu-mankar ...	Hanuman ...	Found in Bhitarkanika and in Kaladwip jungles.
2	Pati-mankar ...	Common Indian monkey	
3	Odha ...	Otter ...	
4	Mahabal bagh ...	Tiger ...	Very common.
5	Kalarapatria or Chita bagh.	Leopard ...	Not very many now. Only found in dense jungles.
6	Gadhia and Heta bagh.	Striped hyena	Found in all jungles.
7	Katas ...	Wild cat ...	Found in inhabited tracts in coppices and <i>kis</i> jungles.
8	Neul ...	Mongoose	Found in jungles only.
9	Bilua ...	Jackal ...	Found in coppices among inhabited tracts.
10	Kokisiali ...	Fox ...	Ditto ditto.
11	Gunduohi musa ...	Ground squirrel	Ditto ditto.
12	Jhinka ...	Porcupine	All over.
13	Thekua ...	Hare ...	Mostly in jungles.
14	Bajarkapta ...	Armadillo	Ditto.
15	Barha ...	Wild pig	Not common. Found in jungles.
16	Mruga ...	Spotted deer	Very common.
17	Bali-harin and Kala baotia.	Black buck	Common in all jungles.
			Found in open lawns near sea-coast, where jungles are not very dense.

29. The extensive swamps, both in jungle and arable areas, after the rains in October, afford resting places to large numbers of migratory birds, which come down from the mountains and stay here till the approach of the hot months. They come in swarms and are of immense varieties, mostly of duck and geese species. The most important of the swamps, where they chiefly congregate, lies in Mukas Jagoola and Saraswati, extending from the Kalinali creek to the Mahulia and the Chhatra creeks, and occupying several square miles of the middle portion of them. The number of birds in this place, early in November, is so immense that when they all fly up, the sky is overcast as if with a cloud. There are other places in the estate where birds are also found in large numbers, but they need not be described. Later in the season, when crops approach maturity, they spread over paddy fields, doing considerable damage to them, and afterwards, when fields and swamps get dry, they go off. The following is a list of birds found in the estate:—

No.	Local Name.	English Name.	REMARKS.
1	2	3	4
1	Gara ...	Water-pelican ...	Common.
2	Saranga ...	Beafsteak-bird ...	Limited in number.
3	Gandalia ...	Shell-cracker ...	Very many.
4	Saras ...	Stork ...	Not many.
5	Baj ...	White crane ...	Ditto.
6	Kala-Koili ...	Black curlew ...	Ditto.
7	Kukura ...	Wild fowl ...	Specially in dense jungles along salt-water creeks.
8	Harar Charhai ...	Green pigeon ...	Not many.
9	Kupte (Kapote) ...	Dove ...	In waste jungles and groves.
10	Kaj ...	Goose ...	Migratory. Come in winter in flocks.
11	.....	Flamingo ...	Ditto ditto.
12	.....	Curlew ...	Ditto ditto.
13	Batak ...	Duck ...	Ditto ditto.
14	Do. ...	Teal ...	Ditto ditto.
15	Surkhab ...	Brahmani duck ...	Ditto ditto.
16	Rajhansa ...	Wild goose ...	Ditto ditto.
17	Ohaha ...	Snipe ...	Ditto ditto.
18	Sarali ...	Whistling teal ...	In unfrequented ponds.
19	Kumhatua ...	Crow pheasant ...	Not many.
20	Dahuka ...	Water-bird ...	In ponds and tanks overgrown with weeds.
21	Pipi ...	Water-fowl ...	Ditto ditto.
22	.....	Black crane ...	Along sea-coast.
23	.....	Partridge ...	In jungles.
24	.....	Seagull ...	Along sea-shores.
25	Tia ...	Parrots ...	Live in jungles, but visit inhabited villages during winter.
26	Katha-hana ...	Woodpecker ...	In inhabited villages.
27	Pani-koca ...	Water-crow ...	In all the rivers and on sea-shores.

Cuckoos, sparrows, swallows and quails are also found.

30. The estate being entirely of alluvial origin, no minerals are of course found here. On the sea-shores, shells are thrown up from which good lime is obtained, but their

quantity is very limited, and the estate derives little benefit from them. Wax and honey are natural products of this estate, and are largely gathered from the jungles, and constitute a source of some miscellaneous income.

River fisheries.

31. The fisheries of the estate are of considerable value, and are divisible into the—

(1) River fisheries. | (2) Creek fisheries. | (3) Tank fisheries.

The river or the Chandnipal fisheries, so called from the jungles of that name, close to which the principal fishing place lies, include the fisheries of

PART I. the two estuaries of Dhamra and Mypara and of the rest of the entire river area
 CHAP. IV. The principal varieties of fish found in them bear local names as follows:—

- | | |
|---------------------|----------------------|
| (1) Khanga. | (9) Ohandi. |
| (2) Nakuri. | (10) Fasia. |
| (3) Telia. | (11) Bhatoca. |
| (4) Bahal. | (12) Prajapati. |
| (5) Kantia— | (13) Karandi. |
| (a) Surankh kantia. | (14) Tori. |
| (b) Gagar " | (15) Tapai. |
| (c) Gunda " | (16) Seranda. |
| (d) Lona " | (17) Bachoca. |
| (6) Ilsi. | (18) Patali chungri. |
| (7) Siramundi. | (19) Jalanga. |
| (8) Chungri— | (20) Bhakta. |
| (a) Andira. | (21) Balia. |
| (b) Baniari. | (22) Tatra chungri. |
| (c) Kantial. | (23) Endola. |
| (d) Manohar. | |

The first ten varieties are salt water fish, the last four are found both in salt and fresh water, and the rest are fresh-water ones.

32. There are two distinct fishing castes in the estate, the *Keuts*, including the *Rarhis*, numbering 4,116, and the *Gokhas*, numbering 2,213. The *Keuts* occupy comparative

Fishing castes.

much higher social position than the *Gokhas*, whose very touch is considered pollution. The former have the monopoly of the river fisheries, except those creeks and beaches, which are exclusively in the hands of the latter, who also hold and work all the creek fisheries. The former fish with nets of twine in the beds of rivers and estuaries, and sometimes by throwing weighted nets from the banks of rivers or from small boats, and the latter with bamboo nets and fence called *shaluas*.

33. The nets employed in fishing in the Chandnipal fisheries are principally of four kinds, called locally (1) *kukut*, (2) *kathi*

Nets used for fishing in rivers.

(3) *ilsa*, and (4) *ghugri*. The *kukut* is a large sized net of broad meshes, and is used for catching fish of large size, such as No. 1 to 5 and 20 and 21. It is used in the estuaries, in the rivers, and also in large and deep tanks. The *kathi* is next in size, and of finer meshes, and is employed to catch fish of size smaller than what can be caught with the first-named net. The *ilsa* net is different from the others, and is designed especially to catch fish of that name. This fish is of good relish and is in much demand, but its supply is limited. All the varieties of small fish are caught with the *ghugri*, similar to which are two other nets called the *mala* and the *arhani* which are often used for small fish. There is another net larger than the *kukut* called *berha*, but this is rarely used in the estate.

34. The fishing season for the Chandnipal fisheries, especially for the estuaries, extends from November to February, and

Fishing season.

the nets are set down and *shaluas* fixed daily for about ten days immediately after each new and full moon, when the tides are high. Salt-water fish are not sold fresh, but are salted and dried on the bank close by, and subsequently sold to petty dealers for internal trade. Some of the varieties of fish might be tinned and salted for export trade, but there is little chance of this trade developing in the hands of the local fishing castes.

35. The fisheries of creeks, as already mentioned, are in the hands of the

Creek fisheries.

gokhas, whose mode of fishing is very simple. They dam up the mouths of the creeks, leaving small openings for water to pass through. These openings they close up with their long, tapering, bag-like nets, locally called *nanji*. These nets are ordinarily removed at flood tide and fixed in at ebb tide, and when large numbers of fish are coming in, are taken out at shorter intervals to clear them of their contents. The following varieties of fish are generally found in creeks:—

- | | | |
|-----------------------------|-----------------|--------------|
| (1) Mala chungri (shrimps). | (6) Fali. | (11) Magur. |
| (2) Bhodai " | (7) Karandi. | (12) Singhi. |
| (3) Tatra " | (8) Tori. | (13) Seul. |
| (4) Bhakta of small size. | (9) Bainabital. | (14) Adi. |
| (5) Kathi Pohola. | (10) Kaw. | |

The first nine varieties are caught by the *nanji* net mentioned above and the others by baskets of bamboos peculiarly made and worked in shallow beds of creeks.

36. The tank fisheries are not of any importance, and have, since 1890,

Tank fisheries.

ceased to be let out, all estate tanks being reserved for supplying water for drinking and other domestic purposes. There are a great many varieties of fish found in tanks, some of which receive their fresh stock of young fish and fry from the rivers during their floods, and some have to be stocked with fry brought from elsewhere. *Rohi*, *bhatur*, *kalabaini* and *miritali* are prized fish, and they are only found in tanks where they are reared.

37. Crocodiles are numerous in rivers and creeks. They attain considerable size—20 to 25 feet head to tail—and are of both

Crocodiles.

found in large tanks, and some of them are very audacious. They kill a large number of domestic animals annually except buffaloes in herds. A single buffalo, however, crossing streams is sometimes dragged down and killed. Human beings are also at times attacked; and bathing in rivers and large tanks known to be infested is dangerous, and persons bathing or fishing along the river banks are often more or less severely wounded. It is said that they do not attack haphazard, but make a careful aim from a distance, and dip down and shoot straight at the object aimed at; and if that object has in the meantime shifted, the attack is missed, and the animal or the human being, as the case may be, is saved. During the floods, when villages are surrounded by water, they come close to the inhabited parts, and persons sleeping in verandahs run the risk of being carried away. There have been many cases of crocodile bites. A fisherman, now our office punkha-puller, was fishing in the river, close to Ganja, with a circular weighted net from the bank, and at one place he had occasion to stop a few minutes, when a crocodile made a jump at him and caught him by the right hand, which was bitten off, and his legs were lacerated by the lashing of the tail. His arm was at once amputated in the local hospital and his other wounds dressed. It took some months to cure him. They do not ordinarily come near boats, and white-painted accommodation or jolly boats are particularly avoided, and no attack on lives even in dug-outs has ever been heard of.

38. Serpents too are numerous, and are of various kinds and sizes: some

Serpents.

are highly venomous, some partially so, and some only bite and cause bad ulcerations, seldom ending in death. They are all found in the midst of habitations and in all likely and unlikely places. In my own bungalow I have seen them in the bedroom, bathroom and cookroom, under the bed and on the bed. The other day I had a regular visitor, who came up to me in the verandah and helped himself unbidden to a chair alongside. He was a *dhamna* about 4 feet long. Only recently, while writing this report, I had a small blue *krait* in among my books and papers, which are daily removed at night and arranged in the morning. I was working all day, and in the evening, on the books being removed, there he was in among the papers! The next evening another similar *krait* appeared in identically the same place. Both these snakes were very small, about 9 to 10 inches, and how they came up to the room is an unsolved mystery.

CHAPTER V.

TRADES AND MANUFACTURES.

39. The trade in the estate is limited, and the articles of commerce

Exports and imports.

comparatively few. Among the imports are cotton piece-goods, metals, specie, twists, tobacco, pulses, mustard oil and kerosine oil. The trade in the last-mentioned article has of late greatly developed. The chief articles of export are rice, paddy, hides and horns. I have no statistics to show the value of imports and exports, but I guess that of exports to be 3 to 4 lakhs a year, and that of imports 2 to 3 lakhs.

40. The sea-trade in former times used to be carried on by means of

Sea-trade.

crafts, some of which the former Rajas of the estate used to own themselves. This trade was only carried on in the winter months, when native crafts from Madras, Ceylon, Laccadive and Maldivé Islands were able to come into the estate for cargoes of rice, which they used to take principally from the Balasore portion of it. The surplus rice of the Cuttack portion used to be sent by country boats to Cuttack, and from there by land to Madras. This trade has almost entirely

PART I.
CHAP. V.

ceased of late, owing to the opening of the Chandbally port, and rice from all parts is now shipped direct to Calcutta. A few crafts from Laccadive and Maldivé Islands even at the present time come (*via* Calcutta, where they dispose of their cocoanut coir, twists and other island produce) to the estate for cargoes of rice which they carry home.

41. Formerly a Kanika village, called Mohurigaon, some two miles from Mohurigaon, at one time a port. Ganja and a mile and a half from Chandbally, used to be frequented by a steamer belonging to a native firm. This port has been given up since 1881, and Chandbally is the only port now used.

42. There are large fisheries in the estate, and dried fish forms one of the principal articles of internal trade. The Chandnipal fishery is of considerable value, and if salt were cheaper, considerable trade in salted fish might have been developed. Salt laws in a seaside place like this, where salt is always at hand, are considered peculiarly oppressive; but in these days of the falling rupee and heavy charges, there is no room for hope for their early withdrawal.

43. The trade in rice for a time somewhat suffered, owing to the dishonest dealings of the people, who adopted the vicious practice of wetting rice intended for export, and for a time, unclean, rotting grain packed in bags were shipped and some profits were made. A day of reckoning, however, came, when the exports decreased, the prices fell, and the people suffered. They have, however, now been to some extent cured of their evil practice, and the trade is being restored to its former state.

44. There are no manufactures in the estate worth speaking of. Coarse cotton fabrics, and brass, silver and shell ornaments are to a limited extent manufactured almost exclusively for local consumption. There are some 1,500 weavers, 311 silversmiths, 85 shell-workers and 105 brass-workers in the estate.

45. Salt used to be largely manufactured in former times, and in 1845 it is found from the settlement *roydad* of that year, that 8,951 *mans* were occupied for its manufacture, and the income of the estate from this source up till that year used to vary from Rs. 12,000 to Rs. 20,000 a year, the charge for fuel consumed being 1½ anna per maund. This charge was reduced to 1 anna, and from 1874 to 10 pies per maund, and the income gradually decreased till about 1887, when it altogether ceased, owing to the discontinuance of the manufacture. I have been unable to obtain information regarding this manufacture for the years 1845 to 1872, but a statement for subsequent years is submitted showing the amount of salt produced, the rate at which fuel was charged, and the amount of fees realized each year:—

YEARS.	Quantity of salt manufactured.	Rate of fees per maund for fuel consumed.	Amount of fees.	REMARKS.
1	2	3	4	5
	Mds.	As. P.	Rs. A. P.	
1873	13,771	1 0	860 11 0	
1874	29,676	0 10	1,545 10 0	
1875	33,889	0 10	1,765 1 5	
1876	39,464	0 10	2,055 8 8	
1877	13,049	0 10	679 10 6	
1878	30,285	0 10	1,576 13 6	
1879	34,614	0 10	1,802 12 9	
1880	28,095	0 10	1,202 14 0	
1881	41,843	0 10	2,179 5 2	
1882	47,028	0 10	2,449 6 3	
1883	36,557	0 10	2,174 0 3	
1884	30,905	0 10	1,610 9 2	
1885	27,376	0 10	1,409 5 6	
1886	13,278	0 10	691 9 0	
1887	3,509	0 10	182 12 2	

CHAPTER VI.

PART I.
CHAP. VI.

TOWNS AND MARKETS.

46. There are no towns within the limits of the estate, which has only 20 villages with population exceeding 500, and they are shown in the following list:—

No.	Name of Elakah.	Name of Village.	POPULATION.			REMARKS.
			Males.	Females.	Total.	
1	2	3	4	5	6	7
1	Ohhamuka ...	Ganja ...	375	394	769	
2		Ohhadesh ...	506	571	1,077	
3		Bainsaria ...	408	431	839	
4		Dalikaenda ...	413	416	829	
5		Siko ...	450	516	966	
6	Kerara ...	Taras ...	359	386	745	
7		Keraragarh ...	388	372	760	
8		Rajpur ...	339	359	698	
9		Belpal ...	425	462	887	
10		Rajnagar ...	380	307	687	
11	Panchmuka	Gourunipokheri ...	273	278	551	
12		Paramanandapur ...	311	302	613	
13		Matto ...	370	381	751	
14		Balipada ...	298	295	593	
15		Narendrapur ...	313	353	666	
16	Panchmuka	Tottapara ...	319	312	631	
17		Haldia ...	254	264	518	
18		Ohherak ...	286	282	568	
19		Singhti ...	283	327	610	
20		Bejoynagar ...	248	271	519	

47. The village Ganja, the head-quarters of the estate, is situated on the left bank of the Kharsoca. Beyond it, is a large, open, sandy stretch, mentioned in paragraph 12 above, on the southern extremity of which have been built the cutcherry-house, the Manager's bungalow, the dispensary building, the doctor's and the amlas' quarters and an inspection bungalow; and these masonry buildings have been connected by pukka footpaths, on both sides of which trees have been planted to form avenues. Close to the Manager's bungalow a 5-acre plot has been laid out for a fruit orchard. The general appearance of the place, with the houses well apart and well located, and the velvety lawns, between and beyond, and the avenues growing, has of late been considerably improved and is much neater and cleaner than it used to be. A village post office was, as an experimental measure, temporarily opened in 1884, and it has now been made permanent and raised to a sub-office. There is a *hat* or market held twice a week—Wednesdays and Saturdays—and it now boasts of a few permanent shops too.

48. The village Ohhadesh lies within a mile of the head-quarters of the estate, and contains over 1,000 people. From it go a large number of *sardars*, bearers and other domestic servants to Calcutta and places beyond. Other villages of Ohhamuka are hardly worth noticing.

49. In Elakah Kerara the village Keraragarh is of some importance, being the seat of the richest idol in the estate, possessing endowed property yielding over Rs. 1,200 a year. After the late Raja Padmanabh Bhanj went off his head, the Rani, the present guardian of the minor, lived for some years at this place, where some kutchas belonging to the Raj are extant.

PART I.
CHAP. VI.

50. Rajnagar village is next in importance, and contains a large Brahman population. It has a police outpost and a sub-tahsil cutcherry-house. A dispensary and a primary school have recently been opened, both of which are doing tolerably well.

51. In Elakah Kaladwip there is not a single village with population over 500. On the sea-coast the seven villages described in paragraph 12 above are a world to themselves, being situated far away from the rest of the estate. Kaladwip-garh is also on the sea-coast and in a line with the seven villages of Satbhaya. It was at one time the seat of the Kaladwip Raj, but is now a deserted site in course of being washed into the sea.

52. In Elakah Panchmuka, which lies in the district of Balasore, the village Matto has a sub-tahsil cutcherry-house built on the south bank of a large and deep tank. There used to be a police outpost located here, but it has recently been abolished, and now there is not a single police station or outpost within this portion of the estate. In fact there is only one outpost now left, and that is at Rajnagar, and it is to be devoutly hoped that this will go too, when something like a millennium will set in! Anyhow, the abolition of two outposts, one from Matto and another from Mohurigaon, indicates that the people are very law-abiding, and so they certainly are.

53. There are at present five *hats* or markets held twice a week, of which two are in Panchmuka, two in Kerara and one in Chhamuka. Of the two in Kerara, one has been opened since 1884. The others have been in existence from before the time of the Court of Wards' management. There was another *hat* in Kerara, at village Nagarh, but it ceased to be paying after the new *hat* at Keraragarh was opened, and it has since 1890 been discontinued.

The names of villages where, and of the days on which, the different markets are held are shown in the following statement :—

No.	Name of Elakah.	Name of village where held.	Names of days on which held.	REMARKS.
1	2	3	4	5
1	Panchmuka ...	Gopinathpur ...	Sundays and Thursdays.	
2	Ditto ..	Matto ...	Wednesdays and Saturdays.	
3	Chhamuka ...	Ganja ...	Ditto ditto	
4	Kerara ...	Keraragarh ...	Ditto ditto	
5	Do. ...	Rajnagar ...	Mondays and Fridays.	

54. The first-named market, though held at village Gopinathpur, is called "Ghanteswar *hat*," taking its name not from the village but from the Muka in which it is held. This *hat* is not an estate property, being held on *debottar* land and its income going to *debottar* funds. Close to this market-place are the sites of the former Raja's houses, tanks and gardens; and the villages surrounding it are fully peopled. A dispensary and a middle class English school have been opened since 1893 and 1891 respectively, and an inspection bungalow is in course of construction, this being an important and central place in that portion of the estate.

55. The other four *hats* are owned by the estate, and yield some miscellaneous income. The principal articles sold in them are—cotton goods, both of local and English manufacture, brass utensils, vegetables (according to seasons), mustard oil, kerosine oil, salt, spices, tobacco leaves, betel leaves, areca nuts and other miscellaneous articles. Rice is chiefly sold in the Matto *hat*, where petty dealers purchase it for sale to the traders in Chandbally, which is only 6 miles from there; and some years before the two places, between which there is considerable cart traffic, were connected by a tolerably good road which has now been allowed

to In the other *Adis* rice is only occasionally brought for sale, and fish is largely sold, in season, in Ghanteswar (Gopinathpur), Matto and Rajnagar *Adis*, which are close to the principal creek fisheries. PART I.
CHAP. VII.

56. The Matto *Adi* is now the most patronized *Adi* in the estate, but it has had its bad days. It appears the local police used to levy a regular cess from the traders and the pedlars, and their oppressions having become unbearable the *Adi* was closed for two or three years before 1875, when it was re-opened; but the exactions of the police did not altogether cease until 1882, when the then Manager, late Babu Srinath Chakravarti, brought the fact to the notice of the Balasore Magistrate, who after due enquiries dealt with the offending police severely, and since then the *Adi* is in an improving and flourishing condition.

57. There are no good shops in the estate, but those in Chandbally are not far off and are resorted to. At Ganja a few shops have recently been opened, but Chandbally being $3\frac{1}{2}$ miles from here, they are not thriving. In the mufassal, petty shops are being opened just to sell a few ordinary necessities, such as salt, oil and tobacco leaves. Rice, pulses and fuel are only sold in roadside villages, through which travellers pass and repass. Some itinerant traders from outside come peddling in boats and do some business in the villages in the interior. Their trade is principally by barter and on credit, and is very profitable. They sell their goods in the hot and the rainy months in exchange for paddy which they collect after the next harvest, and get of course well paid.

CHAPTER VII.

POPULATION AND CASTE DISTRIBUTION.

58. The total population of the estate, excluding absentees and including outsiders temporarily and casually present in it on the census night, as ascertained after careful compilation from the village lists in the Collectories of Cuttack and Balasore, is 77,129; but the actual population as returned in 1894 by the collecting agency, excluding outsiders and including absentees, is 80,684, showing that a considerable number of residents were away from their homes on the census night. There are no correct statistics showing the population for the censuses of 1881 and 1871, and it is therefore not possible to show the rate by which the population has increased or decreased during the last 10 or 20 years. The cyclone of 1885 caused death, directly and indirectly, of some 4,000 persons; but since then the population has been rapidly increasing, and, there is reason to believe, stands at present higher than ever it did before.

59. The results of the last census disclose, as already stated, a total population of 77,129 souls. The total number of inhabited villages is 458, the number of dwelling-houses 13,887, the average density of population per square mile 278, and the average number of persons per dwelling-house 5.5. The density of population varies in the different parts of the estate: in Mukas Ghanteswar, Kangardih, Palaspur and Jasipur, of Panchmuka; in Mukas Ganja, Ayeton and Aria, of Chhamuka; and in Zillas Garberhi, Rajpur and Balikona of Kerara, the average density per square mile is 440, and that in the remaining parts 200.

60. Of the total population of 77,129 souls, 38,621 are males and 38,508 females, and the proportion of males to females is 50.2 to 49.8. Of the males, 15,602 are of age less than 12 years and 23,019 are above that age. Of the females, 15,317 are of age less than 12 years and 23,191 are above that age. The proportion of male children to female children is 50.4 to 49.6, and the percentage of children under 12 years on the total population is 40.

The total population according to religion is classified thus—

Hindus	...	76,171 or 98.7 per cent. of the total population.
	...	953 or 1.2 ditto ditto.
	...	25 or 0.1 ditto ditto.

No Christians are residents of the estate, and the 25 shown above, were outsiders present in it on the census night.

62. The Muhammadans are classified in the census returns

CLASS.	POPULATION.			REMARKS.
	Males.	Females.	Total.	
1	2	3	4	5
Fakeers ...	6	13	19	
Syuds ...	30	4	34	
Sheikhs ...	219	222	441	
Pathans ...	189	250	439	
Total ...	444	489	933	

There are only 422 Muhammadans, residents of the estate, the rest being outsiders casually present in it. They are poor—miserably poor—as a class, and confined to a few villages, but have their spirit and their pride and are generally respected.

63. The Hindus constitute almost the entire population, of whom 37,374 are of superior castes, 948 of intermediate castes, 371 of trading castes, 5,908 of pastoral castes, 1,866 of castes engaged in preparing cooked food, 7,582 of agricultural castes, 3,135 of castes engaged in rendering personal service, 3,650 of artisan castes, 1,542 of weaver castes, 5,803 of boating and fishing castes, and 6,882 are semi-Hinduized aboriginals.

Hindu population arranged according to social rank, showing number, sex and occupation.

64. The following is a list of the Hindu castes found in the estate, arranged in the order of their social position, and showing their number, sex and occupation:—

- (1) *Brahmans* are 2,634 males and 2,357 females; total 4,991. They are of 3 classes—1, the *Sasani*, 2, the *Pujhari*, and 3, the *Mastani*. Those of the first class are supposed to devote their whole time to Sanskrit learning and religious exercises, and are principally supported by land grants. Those of the second class serve as cooks and idol worshippers; and those of the last class follow secular avocations and do all kinds of manual labour except ploughing.
- (2) *Kshatriyas* are 50 males and 55 females; total 105. The *Rajas* of this estate and the *Shamantas* (kinsmen of the Raja) are of this caste. They live by land, part of which is cultivated by themselves and part by others for them.
- (3) *Karans* are 659 males and 341 females; total 1,000. There were many outsiders of this caste during the census, and hence the number of males is considerably in excess of that of females. According to the papers of the collecting agency, the actual population of this caste is 543. A few are tenure-holders, but a great many live by cultivation and by teaching in *pathshalas*.
- (4) *Khandaits** are 15,620 males and 15,622 females; total 31,242. They are most numerous and influential, and they constituted in former times the militia of the estate, holding lands under military tenures. At present they are, by status, pure raiyats, and by occupation, peaceful cultivators.
- (5) *Rajputs* are 28 males and 8 females; total 36. Some outsiders of this caste, serving as peons, were present on the census night, and hence the number of males is more than that of females. Among the residents there are a few of this caste, and they live some by service and some by cultivation.

* Both the *Khandaits* and the *Rajputs* are of warrior castes, and should rank higher than the *Karans* (*Kayasthas*); but as the former have degenerated, and as the *Rajputs* are few in number, the *Karans* are held in higher local esteem than the *Khandaits* and the *Rajputs*.

- (6) *Baisya-Banias* are 28 males and 26 females; total 54. They form rather an extra exclusive caste, not taking food prepared by *Brahmans*. They practise the profession of medicine, and also live by cultivation. PART I.
CHAP. VII.
- (7) *Padhans* are 3,806 males, 3,720 females; total 7,526. They come next to the *Khandaits* in number and influence, are peaceful cultivators, and follow caste rules very strictly.
- (8) *Gurias* are 666 males and 674 females; total 1,340. Are confectioners, and live partly by their calling and partly by cultivation.
- (9) *Gaurs* or *Gopals* are 2,800 males and 3,108 females; total 5,908. Are milkmen by caste, and live partly by cultivation and partly by dairy, and a few by service.
- (10) *Sunari* and *Gandhari Banias* are 141 males and 170 females; total 311. Are silversmiths by profession, but live principally by peddling trade and cultivation.
- (11) *Chitrakars* are 36 males and 31 females; total 67. Are painters by caste, but now live chiefly by cultivation.
- (12) *Malis* are 27 males and 29 females; total 56. A good many serve as gardeners and some have cultivation.
- (13) *Jyotises* are 181 males and 121 females; total 302. These are not lapsed *Brahmans*, as persons of this caste elsewhere are, and are regarded as rather of low caste. They are the village astrologers, cast nativities, announce propitious times for the performance of religious and social ceremonies. Some of them prepare yearly calendars. They live partly by following their caste profession, which does not seem to be a paying one in this estate, and partly by cultivation.
- (14) *Barhais* or carpenters are 336 males and 310 females; total 646. Follow their caste craft largely and have some cultivation besides.
- (15) *Kamhars* (*Lohars*) or blacksmiths are 167 males and 155 females; total 322. Live partly by following their craft and partly by cultivation.
- (16) *Patras* are 18 males and 15 females; total 33. Work in coloured cotton threads, making frills, &c., and live partly by handicraft and partly by trade and cultivation.
- (17) *Kapurias* are 59 males and 58 females; total 117. Trade in cotton fabrics, &c., and live partly by trade and partly by cultivation.
- (18) *Bhandaris* or barbers are 545 males and 658 females; total 1,203. Live principally by service and partly by cultivation.
- (19) *Keuts* are 1,664 males and 1,926 females; total 3,590. Are principal fishing caste in the estate, and live chiefly by fishing and trade in dried fish and partly by cultivation.
- (20) *Kumhars* or potters are 271 males and 241 females; total 512. Make earthen pots for local consumption, and live by their craft and partly by cultivation.
- (21) *Tantis* or weavers are 782 males and 727 females; total 1,509. Manufacture coarse cotton fabrics by hand weaving, and live principally by handicraft and rarely by cultivation.
- (22) *Tamulis* are 56 males and 74 females; total 130. Sell betel leaves, by which they live, and some have cultivation besides.
- (23) *Telis* or oilmen are 781 males and 732 females; total 1,513. Some follow caste calling, some do money-lending business, and some are pedlars, and all hold land more or less for cultivation.
- (24) *Kharwas* are 77 males and 28 females; total 105. Work in brass, preparing rude ornaments, and live thereby. Some have cultivation besides.
- (25) *Malhas* have been included under *Keuts*, but form a distinct caste, and rank lower than the latter, and live chiefly by boating and partly by cultivation.
- his* are 259 males and 267 females; total 526. Are of fishing castes and prepare *churs* (beaten rice), and live by fishing and some by cultivation.

PART I.
CHAP. VII.

- (27) *Kachras* are 166 males and 165 females; total 331. Live partly by trade in brass ornaments and partly by cultivation.
- (28) *Sundhis* are 80 males and 61 females; total 141. Prepare country wine, distil country spirits and retail the same, and live by their calling and have cultivation besides.
- (29) *Kantabudias* are 21 males and 49 females; total 70. Are dealers in tobacco leaves and live by trade and cultivation.
- (30) *Bhats* are 16 males and 69 females; total 85. Are counterparts of the old English bards and live by profession and cultivation.
- (31) *Shagirdpeshas* are 276 males and 306 females; total 582. Are illegitimate issues of mixed castes and have no fixed rank in society. They live principally by domestic service or cultivation.
- (32) *Baishnabs* are 244 males and 204 females; total 448. They belong to no particular caste and are supposed to have renounced the world. Some, however, have families, own property, and live by cultivation, and others live by begging.
- (33) *Sanyasis* are 10 males and 31 females; total 41. Follow no caste rules, are supposed to have relinquished worldly life, and live on charity.
- (34) *Bharathis* are 26 males and 10 females; total 36. Are beggars by profession.
- (35) *Agris* are not residents of the estate. On the census night there were 18 females of this caste who had temporarily come into it.
- (36) *Jogis* are 113 males and 76 females; total 189. Are religious mendicants and live by begging and a few by cultivation.
- (37) *Chhokars* are not residents of the estate, but 10 outsiders were present on the census night.
- (38) *Khadals* are 50 males and 63 females; total 113. Used chiefly to work in salt manufacture, and since its stoppage, live principally by gathering wax and honey from the jungles, and have some cultivation besides. Some of them also shoot deer and wild boars for sale in villages.
- (39) *Bauris* are 100 males and 47 females; total 147. Are generally employed as agricultural labourers, and some have cultivation of their own.
- (40) *Sabars* are 2 males and 1 female; total 3. Live by gathering honey and wax.
- (41) *Bautis* are not residents of the estate. Nine females of this caste from outside were present on census night.
- (42) *Dhobas* are 929 males and 938 females; total 1,867. Are washermen and choppers of wood, and live by following their caste calling and by cultivation.
- (43) *Chamars* are 28 males and 53 females; total 81. Make baskets and other articles of palm leaves for sale, and have cultivation besides.
- (44) *Lodhas* are 39 males and 26 females; total 65. Gather honey and wax and have some land under cultivation on half-produce system.
- (45) *Gokhas* are 1,072 males and 1,141 females; total 2,213. Are the lowest among the fishing castes, work creek and chur fisheries, and have some cultivation too.
- (46) *Matias* are 42 males and 48 females; total 90. Live principally by cultivation.
- (47) *Kelas* are 151 males and 165 females; total 316. Live by begging and by catching and shooting birds for feathers, which they sell.
- (48) *Kandra Baisnabs* are 24 males and 27 females; total 51. They live by begging, and are supposed to have renounced the world, but being of low origin are not classed with those of No. 32 above.
- (49) *Kandras* are 1,808 males and 1,827 females; total 3,635. The chaukidar class and the permanent agricultural labourers are recruited from this caste. Almost all are cultivators, and some among them are good cultivators.
- (50) *Mahurias* are 112 males and 90 females; total 202. Are pipers by calling, and live by begging and cultivation.

- (51) *Pans* are 914 males and 959 females; total 1,873. Are drummers by calling and skin dead animals for hides. They live by caste calling and have some cultivation too. PART I.
CHAP. VII.
- (52) *Doms* are 32 males and 48 females; total 80. Make bamboo baskets and other articles, and live thereby, and have also some cultivation.
- (53) *Mahenters* are 79 males and 75 females; total 154. Are sweepers by caste, and live almost entirely by cultivation, and a few are in service under the *Thakurs*.
- (54) *Karvoos* are 83 males and 18 females; total 101. Are drummers by caste and live by following their caste calling. Their services are in requisition on marriage and other occasions.
- (55) *Chhatrakhiyas* are 3 males and 3 females; total 6. These persons partook of cooked food provided as relief during the famine of 1866, and they have been put out of caste, and are now just at the fringe of Hinduism, even below the semi-Hinduized aboriginals.

65. Outside the above-mentioned castes, but included among Hindus, have been shown the following outsiders found in the estate on the census night:—
Hindus other than Uriyas.

CASTE.	POPULATION.			REMARKS.
	Males.	Females.	Total.	
1	2	3	4	5
Kayasthas	4	...	4	
Bengalis	9	...	9	
Golas	5	...	5	
Telungas	28	24	52	
Total	46	24	70	

66. Of the 55 castes shown above, the last 18 are considered low, the first 5 high, and the rest are Hatooa castes. The low castes are regarded unclean, and their very touch is pollution. The members of the Hatooa castes cannot intentionally touch or assault any one of the low castes, and if they do so, they have to perform the ceremonies of purification, feed the Brahmins and their caste people to be readmitted to the privileges of caste. The members of the high castes do not as a rule lose caste if they touch or assault any of the lower castes, but the members of both high and Hatooa castes are put out of caste if they are assaulted or struck by any of the low castes, and they have to spend a lot of money for readmittance. This readmittance is more expensive in the case of the Hatooa castes than in that of the high castes. Some of the local *mahajans* and money-lenders, dealing with recalcitrant debtors, sometimes employ peons of low castes, and their debts are recovered fast enough; but such tactics are looked upon with disfavour, and the persons having recourse to them justly incur obloquy and lose prestige. All the *chaukidars* in the estate are, however, of low caste, and the dread of the police, generally entertained by the people, is to a great extent due to this fact. So long as the people are catso-ridden, as they are at present, it seems to me that Government might discountenance the employment of men of the *Kandras* caste as *chaukidars*, whose very presence in the police stations is disgusting to the Hatooa castes. The world progresses very slowly, and it is idle to expect an early removal of caste prejudices among people generally steeped in ignorance; but there is no reason why such prejudices, when they do exist, should be permitted to be traded upon. The fear of being touched by the *chaukidar*, or chalaned under his escort, which means loss

PART I. of caste and ruin to some, is much greater than is generally supposed, and
CHAP. VIII. individuals, when so circumstanced, have to buy themselves out to avoid having
to spend a great deal more on subsequent readmittance to caste.

CHAPTER VIII.

RAINFALL.

67. At Ganja, the head-quarters of the estate, a rain-gauge has been in use since the beginning of 1889-90, and daily fall is regularly registered. Two statements—one showing the weekly and the other the monthly fall for the past five years—are given below. From these statements it will be seen that, excluding the abnormal fall towards the close of May 1893, the average for the estate is over 60 inches a year. This amount, if well distributed, is sufficient for purposes of cultivation as carried on in these parts.

68. In this estate nearly 97·4 per cent. of the cropped area (125,880·78 acres) is under winter rice (*Saradh* paddy), for which rain is wanted more or less for seven months, i.e., April to end of October: a heavy, soaking shower in April for fields being ploughed and prepared for the reception of seed; a moderate fall in May and June for supplying requisite moisture for seed and seedlings; a heavier but well distributed fall in July and August for fields being ploughed and puddled into mud and for subsequent transplanting; and a moderate fall, spread over September and October, for the growth and subsequent flowering of plants. Rainfall, however, is not within human control, and there is generally either too much or too little of it at times than is required for cultivation. The following account shows the distribution of rainfall as affecting paddy cultivation in the estate for the past five years. In 1889-90 there was deficiency of rain till May, but a fair fall in the month of June just sufficed for crops to be sown and transplanted, and all went well and a bumper crop was expected till towards the middle of November, when a very heavy fall of rain (some 11 inches) in that month caused some damage to standing crops, and the expected bumper outturn was reduced to an average one. In 1890-91 rainfall was moderate and timely, and exceptionally good crop was reaped, which, after being harvested, was somewhat damaged by subsequent rain in February and March following. In 1891-92 there was excessive rainfall in August and September, which retarded the work of transplanting and also caused some loss of standing crops, and this, followed by deficiency of fall in October, resulted in a poor outturn. The year 1892-93 was exceptionally good. There was no rain till May, but this deficiency was more than made up by the well distributed fall from 7th June to end of October, and an exceptionally good crop was obtained. Last year (1893-94) was peculiarly an unfortunate one. There was enormous rainfall towards the close of May (49 inches by 26th May), when the whole country was flooded and rendered unfit for cultivation for a month or so; and then the rivers rose several times, overflowing their banks and flooding the country, and a very poor crop was

Statement showing the Monthly Rainfall for five years from 1889-90 to 1893-94.

MONTH.	1889-90.		1890-91.		1891-92.		1892-93.		1893-94.		REMARKS
	Number of rainy days.	Amount of rain-fall.	Number of rainy days.	Amount of rain-fall.	Number of rainy days.	Amount of rain-fall.	Number of rainy days.	Amount of rain-fall.	Number of rainy days.	Amount of rain-fall.	
1	2	3	4	5	6	7	8	9	10	11	12
April	...	...	1	0·08	1	0·24	...	1·00	2	1·08	
May	...	...	10	3·00	6	4·00	...	1·00	12	64·77	
June	13	0·07	18	10·04	10	5·00	...	10·77	19	8·12	
July	21	7·70	14	8·21	18	5·00	18	12·00	19	15·14	
August	17	7·00	14	6·51	18	16·25	20	8·00	...	...
September	13	5·74	19	10·00	20	10·00	15	8·00	18	21·00	
October	9	0·74	6	11·24	1	...	...	4·00	5	0·10	
November	7	11·18	2	3·23	3	11·25	...	1·00	...	...
December	...	0·00	1	0·00	...	...	...	...	...	...
January	1	...	...	...	...	...	...	1·00	...	...
February	...	...	9	1·00	1	0·75	...	3·01	...	...
March	8	0·48	7	4·07	...	...	18	0·04	...	...
Total	31	60·08	98	60·11	74	60·07	94	67·00	70	100·00	

Statement showing the Weekly Rainfall for five years from 1890-91 to 1893-94.

* PART I.
CHAP. VIII.

WEEK.	AMOUNT OF RAINFALL DURING—					REMARKS.
	1890-90.	1890-91.	1891-92.	1892-93.	1893-94.	
1	2	3	4	5	6	7
Week ending with 7th April	
Ditto 14th "	
Ditto 21st "	
Ditto 28th "	0.06	24	...	1.08
Ditto 5th May	0.32	...	1.50
Ditto 12th "	3.25
Ditto 19th "	2.31	1.11	...	...
Ditto 26th "83	2.85	1.50	49.27
Ditto 2nd June55	.34	.65	1.45
Ditto 9th "51	2.54	2.65	.15
Ditto 16th "83	3.78	.24	14.95	2.26
Ditto 23rd "	3.46	3.02	.31	1.17	1.62
Ditto 30th "	2.38	5.01	2.73	...	2.69
Ditto 7th July	2.38	2.90	.71	1.17	1.56
Ditto 14th "	1.89	1.82	.53	4.81	6.53
Ditto 21st "	2.23	1.64	1.94	3.67	2.75
Ditto 28th "	1.20	1.85	2.44	2.73	1.00
Ditto 4th August33	6.93	1.66	1.30
Ditto 11th "	2.80	3.55	2.66	1.69	...
Ditto 18th "	3.82	1.90	1.66	.37	...
Ditto 25th "	1.18	.46	2.64	2.79	...
Ditto 1st September19	.17	1.04	1.89	5.10
Ditto 8th "	2.54	1.08	2.70	2.86	1.89
Ditto 15th "	0.20	2.67	6.39	.26	7.35
Ditto 22nd "	1.82	3.16	6.72	.66	6.06
Ditto 29th "58	10.54	3.58	1.50	1.43
Ditto 6th October33	1.21	...	0.25	...
Ditto 13th "	1.35	9.23	...	...	...
Ditto 20th "	5.80	.21	...	...	4.63
Ditto 27th "	2.26	...	...	3.05	.53
Ditto 3rd November	1.59	.95	2.93	...
Ditto 10th "	1.97	11.25	...	.7.
Ditto 17th "	6.47	...	...	...	...
Ditto 24th "	4.72	...	...	...	...
Ditto 1st December
Ditto 8th "
Ditto 15th "05	...	...	...
Ditto 22nd "
Ditto 29th "
Ditto 5th January
Ditto 12th "
Ditto 19th "	1.50	...
Ditto 26th "50	...	...	.42	...
Ditto 2nd February
Ditto 9th "	1.33	...
Ditto 16th "75	.60	...
Ditto 23rd "	1.17	...	2.25	...
Ditto 2nd March20	...	1.55	...
Ditto 9th "	1.34	...	3.40	...
Ditto 16th "45	2.00	...	2.24	...
Ditto 23rd "68	...	2.38	...
Ditto 31st "85	...	...	...
Total ...	49.38	66.11	63.57	67.43	103.61	

CHAPTER IX.

CLIMATE.

69. The climate of the estate, like that of the rest of Orissa, is divided into three seasons—the hot, the rainy and the cold. The hot season commences in March and lasts till the monsoon sets in, *i.e.*, about the first or the second week of June; the rainy season extends up to October or thereabout, and the cold weather prevails from November till February. A record of daily temperature has been kept for Ganja since June 1889, and two statements—one showing the weekly average and the other the monthly average temperature—are hereto annexed. The average temperature for the past four years has been 83·7 for 1890, 85·6 for 1891, 86·9 for 1892 and 83·7 for 1893.

70. About one-third of the estate consists of low jungles and marshes, which are, as it were, enveloped in obnoxious atmosphere, and are very unhealthy. The climate of even the cultivated portions cannot be said to be salubrious. The sandy stretches described in paragraph 12 are, *com* speaking, the healthiest parts of the estate, and Ganja, its head-quarters, *situ* on a sandy strip of land, 3 miles long and 200 yards broad, being naturally well-drained, is a tolerably healthy place. It is, however, surrounded by low fields, which towards the close of the rains generate malarial germs, and it is then subject to fevers like the rest of the estate, the climate of which as a whole is unhealthy. In the rainy and the cold seasons endemic diseases generally prevail, and in the hot months, epidemics (cholera and small-pox) often make their appearance.

71. There is only one place in the estate which may be said to be its *Sanatbhaya* sanitarium. It lies on the sea, where fresh whole-some water is obtainable in abundance, and where the sea breeze is fresh and invigorating. At this place (*Sanatbhaya*) we have now got a pukka inspection bungalow, where rest may be obtained, health recruited, refreshing sea bath enjoyed and limbs stretched. The place offers other attractions besides. Across the creek there are dense jungles, in which deer, wild pig and tigers abound, and in the cold season open swamps are filled with migratory birds, and so a sportsman has his choice of game.

72. The estate consists of almost dead level of plains, the monotonousness of which is relieved, here and there, by patches or ranges of uplands. These uplands absorb more heat and are therefore warmer than the plains. In the sandy tracts, however, there is always good supply of fresh water, which is scarce in the clayey plains, where wells cannot be sunk and where tanks silt up and get dry. Well water in the plains is always brackish, and there are therefore no wells in most parts of the estate, and the people have nearly always to suffer from scarcity of water, and the suffering becomes keener in years of excessive heat. The supply of fresh water for drinking and other domestic purposes is a serious question in this estate, and it will be discussed in the last part of this report, where suggestions for improvements will be made.

73. There are three dispensaries in this estate, the annual cost of maintenance of which is Rs. 2,094. The Ganja Dispensary has been in existence since 1884, and the two mufassal dispensaries—one at Ghanteswar and another at Rajnagar—have been opened since 1893. The prevailing diseases treated in the dispensaries are—fever, malarial fever, dysentery, dyspepsia, diarrhoea, colic, intestinal worms, constipation, piles, enlargement of spleen, liver diseases, catarrh, oozena, bronchitis, asthma, diseases of the lung, rheumatic affections, gonorrhoea, diseases of the urinary system, neuralgia, iritis, opacity of the cornea, diseases of the ear, scabies, psoriasis, eczema and ringworm.

*Statement showing Monthly Average Temperature recorded at Ganja during the years
1890 to 1893.*

PAGE I.
CHAP. IX.

MONTH.	AVERAGE TEMPERATURE FOR—				REMARKS.
	1890.	1891.	1892.	1893.	
1	2	3	4	5	6
January	78.1	77.6	85.4	83.4	
February	77.0	78.9	87.5	84.3	
March	84.5	83.8	92.2	80.2	
April	93.6	95.3	94.9	91.3	
May	93.5	93.1	96.2	82.8	
June	88.7	92.9	83.0	84.6	
July	84.3	84.1	83.9	84.5	
August	83.9	84.0	82.7	80.9	
September	85.8	83.7	82.6	80.6	
October	82.0	86.4	82.9	84.3	
November	79.8	83.2	85.2	83.0	
December	78.3	84.6	85.0	84.9	

*Statement showing Weekly Average Temperature recorded at Ganja during the years
1890 to 1893.*

WEEK.	AVERAGE TEMPERATURE FOR—				REMARKS.
	1890.	1891.	1892.	1893.	
1	2	3	4	5	6
Week ending with 7th January ...	71.6	76.0	86.4	84.3	
Ditto 14th " ...	74.5	76.9	86.9	84.5	
Ditto 21st " ...	74.9	78.4	87.1	83.2	
Ditto 28th " ...	72.4	78.9	88.1	80.2	
Ditto 4th February ...	70.8	78.6	88.7	81.7	
Ditto 11th " ...	75.4	76.9	88.2	81.8	
Ditto 18th " ...	77.9	75.0	89.5	81.4	
Ditto 25th " ...	79.7	83.6	83.9	80.5	
Ditto 4th March ...	80.7	81.9	88.0	79.3	
Ditto 11th " ...	81.4	82.7	89.5	80.3	
Ditto 18th " ...	82.9	83.3	90.8	78.8	
Ditto 25th " ...	86.5	85.4	93.6	79.4	
Ditto 1st April ...	89.7	83.7	94.8	80.4	
Ditto 8th " ...	91.8	93.4	95.1	85.0	
Ditto 15th " ...	92.8	94.5	94.8	80.4	
Ditto 22nd " ...	93.7	96.3	95.0	95.1	
Ditto 29th " ...	95.8	96.2	94.8	91.1	
Ditto 6th May ...	97.7	97.9	96.0	89.6	
Ditto 13th " ...	95.7	97.9	96.9	79.6	
Ditto 20th " ...	89.4	91.3	98.3	81.2	
Ditto 27th " ...	93.5	89.8	96.6	87.1	
Ditto 3rd June ...	93.6	89.9	92.0	80.9	
Ditto 10th " ...	91.4	91.1	90.1	83.4	
Ditto 17th " ...	96.5	91.5	77.1	83.7	
Ditto 24th " ...	83.6	96.9	80.1	85.3	
Ditto 1st July ...	85.7	92.3	83.7	80.8	
Ditto 8th " ...	84.2	82.8	84.6	84.0	
Ditto 15th " ...	84.0	84.5	86.4	84.6	

PART I.
CHAP. X.

*Statement showing Weekly Average Temperature recorded at Ganja during the years
1890 to 1893—concluded.*

WEEK.	AVERAGE TEMPERATURE FOR—				REMARKS.
	1890.	1891.	1892.	1893.	
1	2	3	4	5	6
Week ending with 22nd July ...	86.6	84.3	80.7	84.4	
Ditto 29th " ...	83.1	83.8	82.6	84.6	
Ditto 5th August ...	82.9	83.6	83.4	84.0	
Ditto 12th " ...	82.9	83.6	82.0	83.5	
Ditto 19th " ...	85.7	82.7	83.6	81.1	
Ditto 26th " ...	82.9	85.8	83.5	79.3	
Ditto 2nd September ...	86.6	85.6	80.0	79.3	
Ditto 9th " ...	88.8	83.9	79.8	81.3	
Ditto 16th " ...	85.9	85.2	81.7	81.0	
Ditto 23rd " ...	83.1	85.7	87.1	80.0	
Ditto 30th " ...	82.6	83.8	82.6	79.1	
Ditto 7th October ...	84.9	87.7	80.8	83.9	
Ditto 14th " ...	83.3	85.6	83.5	87.8	
Ditto 21st " ...	80.6	86.3	87.5	87.2	
Ditto 28th " ...	80.6	86.6	82.3	87.2	
Ditto 4th November ...	79.9	85.9	79.1	86.7	
Ditto 11th " ...	81.6	80.0	82.9	84.6	
Ditto 18th " ...	79.3	83.3	85.8	82.2	
Ditto 25th " ...	79.4	84.2	86.4	82.2	
Ditto 2nd December ...	78.4	84.4	86.4	82.7	
Ditto 9th " ...	78.9	84.2	86.1	84.2	
Ditto 16th " ...	78.8	83.4	85.7	84.9	
Ditto 23rd " ...	79.2	84.1	85.1	85.4	
Ditto 31st " ...	76.8	86.0	84.1	85.1	

CHAPTER X.

SOURCES OF IRRIGATION.

74. For the cultivation of rice crop, which is almost exclusively grown in the estate, no artificial irrigation is ordinarily necessary. If the monsoon rains fail at critical times, such as about the sowing, transplanting or flowering time, some irrigation is practised to tide over some temporary dryness; but if this failure is serious and prolonged, a drought is inevitable, to meet which the estate is peculiarly ill-prepared. For the winter crops which are grown on alluvial land along the banks of fresh water rivers and in the beds of creeks, and for some vegetables and other special crops, some irrigation is regularly practised; but the entire area under such crops is only 593.41 acres, and for want of the means of irrigation it does not admit of extension.

Area irrigated.

75. According to the survey records, the area irrigated is 16,893.22 acres, as detailed below :—

No.	Sources of irrigation.	Area irrigated.	REMARKS.
1	2	3	4
1	Rivers	A. D. 13,897 70	
2	Creeks	5 05	
3	Ponds and ditches ...	3,080 47	
	Total ...	16,893 22	

The percentage of area irrigated, according to the survey records, on the total cropped area of the estate (125,890.78 acres) is 18.5.

PART I.
CHAP. XI.

76. The last settlement papers do not contain statistics about irrigation, and hence the areas irrigated before and now cannot be compared. As observed before, there is no regular irrigation practised in the estate. In the first place, in ordinary years of average rainfall no irrigation is required for rice cultivation, which, as stated, is almost exclusively grown in the estate, and in the next place the sources of irrigation are limited. There is plenty of water, but not fit for irrigation. The rivers and the creeks in it are tidal, and for the greater part of the year more or less brackish. What is wanted is to store and regulate the natural supply of rain water. Providence gives plenty of water, and it is for man to husband it and utilize it according to his requirements.

CHAPTER XI.

TENURES AND TENURE-HOLDERS.

77. The total area shown in paragraph 4 above as "cultivated or otherwise occupied" is 128,221.33 acres. An area of 198.57 acres is held by Government, 98.88 acres by the District Boards of Cuttack and Balasore, 45.57 acres by the proprietor as *Kothkhanabadi* or raj-homesteads, and 92.77 acres by the mother and guardian of the minor Raja. Excluding the area held by the Government, the District Boards, the proprietor and his mother, the balance, viz., 127,785.54 acres, is held under the following tenures* :—

	Acres.
(1) Under raiyati tenures which will now be called holdings	... 107,960.24
(2) Under service tenures which may also be called holdings	... 1,144.62
(3) Under proprietary or permanent tenures	... 17,840.51
(4) Under jungle reclamation tenures	... 1,044.17

78. The raiyati tenures or holdings are of two kinds, locally called *thani* and *pahi*. The *thani* tenures or holdings include land held by raiyats within the boundaries of the villages in which they reside, and the *thani* raiyats are properly speaking the "settled raiyats" of the Tenancy Act. The settled raiyats, holding only uplands assessed at rather high rates, are called *chandna* raiyats, and their homesteads, *chandna* lands, as distinguished from resident raiyats, whose rice lands are called *thani* lands, unassessed homesteads, *thani minha* and assessed homesteads, *harmasool* lands. Many of the old *chandna* raiyats having acquired rice lands, and with them the right to *thani minha*, or rent-free allowance of homesteads, the number of those who would still be *chandna* has now been considerably reduced.

The *pahi* tenures or holdings include land under cultivation held by raiyats in villages other than those in which they reside, and the *pahi* raiyats are either occupancy or non-occupancy raiyats, according as they have held their lands for 12 years or less, but all *thani* raiyats are treated as occupancy raiyats irrespective of their period of occupancy.

79. The service tenures include land, either homesteads or rice lands or both, granted as remuneration for services usually rendered and are held by the—

- (1) Estate servants (chaukidars, ferrymen, &c.);
- (2) Superior or respectable servants of the Raja (Shamantas);
- (3) Private servants of the Raja (barbers, bearers, &c.); and
- (4) Village servants (carpenters, washermen, &c.)

80. The proprietary tenures are permanent tenures and they are held as—

- (1) *Debottar*.—Endowed for the worship of Hindu idols;
- (2) *Pirottar*.—Endowed for the worship of *Pirs* (Muhammadian saints);

* These tenures will be fully and comparatively explained in Part IV of this report.

† The expression "Proprietary tenures" has been used in the report as opposed to "service tenures," and not as meaning the interest of talukdars, mukarraridars or farmers. These proprietary tenures consist of petty grants of land, rent-free or *Thabi* or both. The rent-free ones may be called "tenures," but the *Thabi* ones are properly speaking "raiylati holdings at fixed rents," as defined in Chapter IV of the Tenancy Act. Following the existing practice, both raiyats at fixed rents and rent-free holders have, however, been classed as tenure-holders.

PART I.
CHAP. XII.

- (3) *Brahmottar*.—Granted for the support of Brahmans;
 (4) *Khairat*.—Granted for the support of Hindu devotees;
 (5) *Khusbarmelak*.—Granted for the support of respectable families settled in the estate; and
 (6) *Datta Anugraha*.—Granted as reward for some particular service or as mark of especial favour.

81. There are five jungle reclamation tenures created during the currency of the last settlement by the grant of special clearing leases, and they are held one by a mustagir of the estate and four by two speculators of district Midnapore, at present residing, one at Chandbally and the other in the estate. The total area under them is 1,045·17 acres.

CHAPTER XII.

SOIL AND CROPS.

82. The lands included in village areas are of two Division of land according to soil. and *jala* or lowland. The former are of high level and consist of sand, of sand and clay or of pure clay, and the latter are of low level and consist almost entirely of pure clay, and are usually flooded during the rains. The total area of upland is 4,371·30 acres and that of lowland 123,850·03, and they are either cropped or uncropped.

83. Excluding the uncropped area 2,340·55 acres, consisting of sites, covered by dwelling-houses, culturable and unculturable wastes, the cropped area comprises homesteads or *kala* and rice or *jala* land. The former consists of garden plots attached to dwelling-houses, of unattached orchards, and of detached bits of uplands on which are grown miscellaneous crops. The latter are all under rice of different kinds. The total cropped area of the estate is classified as follows:—

No.	Description of land.	Area.	REMARKS.
1	2	3	4
1	Attached garden plots ...	A. n. 2,599 71*	
2	Unattached orchards ...	294 53	
3	Detached bits of upland ...	174 71	
	Total of <i>kala</i> or homestead land.	3,068 95	
4	Under <i>Saradh</i> (<i>aman</i> or winter rice).	121,645 30	
5	Under <i>Beah</i> (<i>aus</i> or autumn rice).	183 41	
6	Under <i>Dahua</i> (<i>boro</i> or early summer rice).	13 48	
7	Under <i>Dofosal</i> (autumn rice followed by <i>rabi</i>).	969 69	
	Total of <i>jala</i> or rice land ...	122,811 83	
	GRAND TOTAL ...	125,880 78	

84. The soil of the garden lands attached to dwelling-houses has, in course of time, been very much enriched by refuse of all kinds being thrown upon it, and is thus rendered fit for growing every kind of crop, and is hence called *karmasol* (every crop land).

* The area for the attached dwelling-houses, is only approximate, as areas of the sites and the plots

covered by

The crops generally grown thereon are very many and a few principal ones thereof are mentioned, but the details of area under each, it is of course impossible to give. PART I.
CHAP. XII.

Local name of crop.	English name of crop.	REMARKS.
1	2	3
Kandamul ...	Sweet potatoes.	
Basun ...	Garlic.	
Piaj ...	Onions.	
Nalita ...	Jute.	
Saru ...	Caladiums.	
Alu ...	Yams.	
Kadali ...	Plantain.	
Kakuri ...	Cucumbers.	
Maka ...	Maise.	
Bhendi ...	Ram-torai or Akra.	
Janhi ...	Torai.	
Baitkakharu ...	Pumpkin.	
Pani-kakharu ...	Ditto.	
Kalara ...	Karela.	
Baigan ...	Brinjala.	
Dhuanpatra or Tamba- khu ...	Tobacco.	
Sorisa ...	Rape.	
Haldi ...	Turmeric.	

The attached orchards contain trees, a few wild but mostly planted, and are sometimes utilized for growing root crops, such as yams and sweet potatoes.

The following is a list of trees and perennial plants found in orchards, garden plots and elsewhere in the arable parts of the estate:—

Local name of trees or plants.	English or botanical name of trees or plants.	REMARKS.
1	2	3
Amba ...	Mango ...	Grown everywhere.
Panas ...	Jack ...	Grown mostly in sandy soil.
Naria ...	Cocconut ...	Ditto ditto.
Tal ...	Fan palm ...	Grows wild in sandy soil.
Oau ...	Dás (<i>Uillenia Indica</i>) ...	Grown everywhere.
Amra ...	Spondias magnifera ...	Ditto.
Karmanga ...	Averrhoa carambola ...	Grown generally in sandy tracts.
Kendu ...	Kendu (<i>Diospyros melanoxylon</i> .) ...	Grown everywhere.
Pijuli ...	Guava ...	Ditto.
Kamalalebu ...	Lemon or orange ...	Ditto.
Tabha, Kagji ...	Mustard-apple and bullock's heart.	Ditto.
Atta ...	Pine-apple ...	Grows wild mostly in sandy tracts.
Mwá ...	Anona muricata ...	Ditto ditto.
Sapuri ...	Pomegranate ...	Grown in gardens or in orchards.
Jent ...	Cashew-nut ...	Grown in sandy tracts.
Dalimba ...	Jamun (<i>Eugenia jambolana</i>) ...	Ditto.
Setyamba ...	Tamarind ...	Ditto.
Jama ...	<i>Nardus orientalis</i> ...	Grown everywhere.
Tantal ...	<i>Ucuis longifolia</i> ...	Ditto.
Kadamba ...	Date ...	Grown mostly in sandy soil.
Debadaru ...		Grows wild.
Khajuri ...		

PLAT I
CHAP. XII.

Local name of trees or plants.	English or botanical name of trees or plants.	Remarks.
1	2	3
Palás ...	<i>Butea frondosa</i> ...	Grown in orchards.
Harida ...	<i>Terminalia chebula</i> ...	Ditto.
Punang ...	<i>Hotikra tinctoria</i> ...	Ditto.
Badám ...	Country almond ...	Grown in sandy tracts.
Narkoli ...	.....	Ditto.
Amritbhandá ...	Paw-paw ...	Grows wild.
Bará ...	<i>Ficus bengalensis</i> ...	Grown in sandy tracts.
Aswathá ...	<i>Ficus religiosa</i> ...	Ditto.
Kotahilá ...	<i>Nux vomica</i> ...	Found growing wild in sandy tracts.
Báns ...	Bamboos ...	Grown in sandy tracts.
Nimba ...	<i>Melia Indica</i> ...	Ditto.
Paládhua ...	<i>Erythrina Indica</i> ...	Ditto.
Bel ...	Bel or Quince (<i>Aegle marmelos</i>) ...	Ditto.
Gooá ...	Areca or betel-nut ...	Ditto.
Karanja ...	<i>Pongamia glabra</i> ...	Ditto.
Burkoli ...	Bee-plum (<i>Zizyphus jujuba</i>) ...	Grown everywhere.
Sajna ...	<i>Hyperanthera morunga</i> ...	Ditto.
Baul ...	<i>Mimusops elengi</i> ...	Not confined to sandy tracts.
Kaitha ...	<i>Ecronia elephantium</i> ...	Grown in sandy tracts.
Pán ...	Betel ...	Ditto.
Kantai-koli ...	<i>Zizyphus anoplia</i> ...	Grows wild in sandy tracts.
Asarhwa ...	<i>Capparis horrida</i> ...	Grown everywhere.
Tundaporá ...	<i>Toddalia aculeata</i> ...	Ditto.
Simuli ...	<i>Bombax malabaricum</i> ...	Confined to sandy tracts.
Bot ...	Cane ...	Found growing wild in hedges and jungles.

On the detached bits of grounds are generally grown miscellaneous crops the details of which are given in the following statement :—

Local name.	English name.	Botanical name.	Area under each crop.
1	2	3	4
Mandia ...	Millet ...	<i>Eleusine coracana</i> ...	Acres. 19.44
Birbi ...	Kalai ...	<i>Phaseolus radiatus</i> ...	56.00
Harar ...	Arhar ...	<i>Cytisus cajan</i> ...	108.54
Kolatha ...	Kulthi ...	<i>Dolichos biflorus</i> ...	4.19
Barguri ...	Bargara ...	<i>Dolichos katjang</i> ...	3.11

85. The areas shown under the different crops of rice are liable to vary from year to year. In years of severe floods, in which *saradā* and *baak* crops of rice have been considerably damaged, *rabi* and *dahis* crops are more largely grown than in other years. The area under *baak* is, however, subject to greatest fluctuation. This crop is mainly grown to provide food for the autumn months, when food-supply in rural tracts is usually scarce, and is more so in years following those of poor *saradā* crops, and in such years it is very largely grown.

86. Defasal lands are only found along the banks in the upper parts of the Brahmani and the Kharsosa, and are either alluvial or in receipt of annual deposit of silt. The crops grown on such lands, which follow the *beak*, or the early variety of *saradh*, are shown in the following statement:—

Local name.	English name.	Area under each crop.	REMARKS.
1	2	3	4
Kapa ...	Cotton ...	Acres. 92-91	Area under this crop is not shown in the survey records, but it is grown along alluvial banks of fresh water rivers.
Muga ...	Moong (<i>Phaseolus mungo</i>) ...	279-88	
Birhi ...	Kalai (<i>Phaseolus radiatus</i>) ...	150-90	
Khasa ...	Sesamum ...	189-59	
Kolatha ...	Kulthi (<i>Dolichos biflorus</i>) ...	10-00	
Barguri ...	Bargara (<i>Dolichos katjang</i>) ...	9-00	
Jaham ...	Wheat	

87. Except the homestead garden land, which, being artificially enriched, is nearly of uniform quality, all cropped lands have, at this settlement, been divided according to fertility into three classes—

Under the 1st class have been included all rice land generally, which retain moisture up till ripening time in November, and all alluvial lands on the banks of rivers, which are as a rule rich in plant food, and also all *kala* or homestead land containing a good mixture of sand and clay.

Under the 2nd class have been included rice land of intermediate level retaining moisture till September or thereabout, and generally devoted to growing *beali* or the *laghu* variety of *saradh* and to raising seedlings, and also *kala* or uplands containing more sand than clay and somewhat deficient in plant food. All inferior soil, both of *kala* and rice lands, have come under 3rd class.

The classification of soil for each kind of crop, as made by the survey party, is shown below—

<i>Saradh.</i>			<i>Defasal.</i>		
1st class	...	33,620-30	1st class	...	234-87
2nd "	...	49,393-04	2nd "	...	452-76
3rd "	...	38,631-96	3rd "	...	282-06
Total	...	121,645-30	Total	...	969-69
<i>Beak.</i>			<i>Basefasal.</i>		
1st class	...	17-24	1st class	...	153-76
2nd "	...	103-70	2nd "	...	353-00
3rd "	...	62-47	3rd "	...	161-36
Total	...	183-41	Total	...	668-12

The area under the *dalus* crop is only 13-43 acres which are all of 1st class, being low beds of fresh water creeks or alluvial banks of rivers.

CHAPTER XIII.

SYSTEM OF AGRICULTURE.

88. The entire cropped area, as shown in paragraph 83 above, is 125,880-78 acres, of which 122,811-83 acres, or 97-4 per cent., are under rice alone, which constitutes the staple crop of the estate and is grown principally as *saradh* (*aman* or winter crop), only

PART I. to a small extent as *beali* (autumn crop), and rarely as *dhala* (spring crop). The *beali* crop is grown on the alluvial banks of rivers and creeks, on low and poor homestead, and sometimes on high 2nd class land. The fields intended for growing it, are ploughed and reploughed some six times, from February to May, if rainfall is seasonable, in order to expose the soil to sun and air and to destroy weeds, and after a heavy soaking fall of rain, are harrowed and levelled to break up large clods of earth. This crop is generally raised by sowing broadcast, and very rarely by transplanting. In April or May, seed is sown at the rate of 25 seers to the acre, once east to west and then north to south, the object of cross sowing being to ensure proper distribution, and ploughed and harrowed in with unindented harrow (*moye*) when the process of sowing is finished.

The plants come up in about four or five days, and when they are 9 inches or so high, the fields are harrowed with the two-fold object of loosening the soil and of removing weeds which are mostly taken out by the iron teeth attached to the implement locally called *bida*, and the rest are pulled out with the help of the sickle. Once or twice again the fields are weeded, but not ploughed as those of *saradh* are. The usual time for the *beali* harvest is about September, and the crop is reaped before it is fully ripe as the grains are liable to drop off when dry.

The cost of cultivation is as detailed below—

	Rs.	A.
(1) Cost of ploughing five to six times	1	8
(2) " 30 baskets of farmyard manure	0	8
(3) " applying manure	0	4
(4) " seed (25 seers)	1	0
(5) " harrowing	0	2
(6) " weeding	1	0
(7) " reaping	0	12
(8) " binding and carrying home sheaves	1	0
(9) " threshing	0	8
(10) Rent	1	4
Total	7	14

The outturn of this crop which is grown on inferior or *dofasal* land is generally poor, and is from 6 to 9 maunds of unhusked paddy valued at about Rs. 9 per acre, and the cost of cultivation being about the same, it is not a paying crop. But, as stated above, it is grown principally to provide food at a time when last year's supply is almost exhausted, is followed by another crop, *rabi* or late *saradh*, in the same year, and the labour, which has been valued in the account of cost of cultivation, is that of the cultivator himself and of his family.

89. *Saradh* or winter rice is the principal staple crop of this estate, and is both sown and transplanted. In the upper portion of the estate, liable to be annually flooded from the freshets in the rains, it is sown broadcast in the lowlying land of 1st class, and for other lands it is first raised in nurseries and then transplanted. In the lower portions, such as Mukas Jagula and Saraswati of Panchmuka and Dangmal and Ghariyamál of Chhamuka, the system of transplanting is almost exclusively followed.

90. *Saradh* lands, especially those intended to be sown, are ploughed as soon as there is rainfall after the last crops are off the fields. Rainfall in February is considered a favourable sign for a good crop, but there is seldom any fall so early in the year, and the first ploughing is delayed from March to May, and altogether two to four ploughings are given before seed is sown.

There are four modes of sowing, locally called (1) *kharari*, (2) *batari*, (3) *achhará*, and (4) *sarid*. Under the first mode seed is sown before, but in reasonable expectation of, rainfall. Seed grains in this case, though ploughed and harrowed in, are liable to be picked up by birds; but the crop is better able to stand floods. I have seen crops sown in this way surviving complete immersion lasting 20 to 25 days. The standing plants after long immersion are

as a rule destroyed; but from the roots come up shoots after water has subsided, which yield nearly as good a crop as could have been expected from the old plants. PAGE I.
CHAP. XIII.

The second is the usual mode of sowing, which is done after there has been rainfall, and when the ground to be sown is moist and has been previously prepared. The seed is broadcasted, ploughed and harrowed in the usual way, and the operation is finished.

The third mode is adopted in places usually flooded with tide water, and where fields cannot be ploughed and prepared in time for sowing before heavy rainfall. Under this mode the seed grains are kept soaked in water for two or three days, and after they have germinated, are broadcasted over fields previously ploughed into mud.

The last mode, which is rarely adopted, consists in dropping seed grains in plough furrows and harrowing in the seed.

When the plants are 10 or 12 inches high, the fields are ploughed and harrowed with the object of removing the weeds and loosening the earth to help growth. This is followed by hand weeding, which is only once done for this crop, while *beali* is usually weeded twice.

91. For raising seedlings a plot of land, either a corner of 2nd or 3rd class field or a piece of homestead, is selected. This plot is thoroughly ploughed and exposed to sun and air, and usually heavily manured with rotten dung and ashes. After rainfall or artificial irrigation seed is sown, from May to July, at the rate of one maund and a half per acre, and ploughed and harrowed in. Seedlings are ready for transplanting when they are a foot or so high. The nurseries, if not wet, are artificially irrigated before seedlings are pulled up, and their roots are washed before being planted. An acre of seed bed usually yields sufficient seedlings to plant 4 to 5 acres.

92. Lands intended for transplanting, except those near the sea-coast, are ploughed, if possible, in summer; and if not, field ridges are repaired in the rains, and fields covered with rain-water a few inches deep are ploughed and reploughed into mud with weeds mixed up, and are then ready for being transplanted—the season for which extends from June to August, and for the sea-coast places, up to puja holidays in September or the beginning of October. Transplanted crops do not require weeding, nor, as a rule, any artificial irrigation or manure.

93. There are two principal species of rice grown, the *guru* and the *laghu*. The former is generally grown in lowlying fields, broadcasted after the *baturi* or the *kharari* mode of sowing, and reaped in January. The latter is usually both sown and transplanted and ripens a month or so earlier. The reaping of the *saradh* crop therefore commences from about the 15th December and lasts till the end of January, and sometimes till the middle of February.

The implement used in reaping is the sickle, and the crop is cut close to the ground, not like the *beali* crop, the ears of which alone are usually cut off. The crops, after being cut, are left for about a week flat on the ground, exposed to sun and dew, and are then bound into sheaves, generally in the morning when they are soft. The sheaves are carried to the threshing-floor, previously well cleaned and plastered, where they are kept in conical stacks with the ears inside, so as to let the rain-water slide down without damaging the contents.

94. There are two modes of threshing—one by beating out grains by hand, and the other by having them trodden out by bullocks. The first mode is adopted to obtain straw for thatching purposes, and the other for cattle fodder. For threshing by hand an inclined platform of wooden planks on four upright posts is erected, and the sheaves are held by the roots with both hands and struck against the platform, and grains are thereby threshed out.

For threshing with the help of bullocks an upright post is fixed in the ground, round which a number of bullocks tied together are driven. The sheaves are untied and strawn over the floor and the grains are trodden out. The grain and the chaff are separated by the help of a strong wind, which generally prevails in early summer, and the process of winnowing is simplicity itself. Both are poured down out of a winnowing basket, locally called *kula*, from

PART I. a height of about five to six feet, when the grain, being heavier, falls nearer than the chaff, which is blown some distance, and they are thus separated.

CHAP. XIII. 95. The cost of cultivation is nearly the same whether the crop is sown or transplanted. The cost of seed, weeding and ploughing is more in the case of sowing than in that of transplanting; but in the latter there is the additional cost of transplanting. The average cost of cultivation per acre for this estate, if fully valued, would be about Rs. 8 or Rs. 9.

The outturn of paddy per acre is generally said to be 12 maunds, but I am not inclined to accept this average as correct. In 1892 I caused the actual produce of 60 plots of different classes and in different parts of the estate to be weighed, but the attempt was a failure. In some cases the supervising *amlas* were reasonably suspected of having been bought over, and in some others they were hoodwinked by the raiyats concerned. The settlement was at the time in progress, and the raiyats were afraid of letting the exact amount of the outturn being ascertained, lest rates should be enhanced, and though I explained that such would not be the case, their fear was not removed; and when they failed to win over the supervising muharrirs, they worked at dead of night and tampered with the sheaves, removing some, without either reducing their number or changing their form. Against such determined opposition there was no chance.

The work of one muharrir was, however, very carefully done, and the results of his experiment are given below—

Name of village.	Khasra No. of selected plot.	Class of land.	Area.	Paddy in Balasore weight (seer -80 tolas.)	Outturn calculated to the acre.
1	2	3	4	5	6
Balarampur Muks Gharayamal Elaka Ohhamuka	600 208 454	1st 2nd 3rd	Acre. 1.21 1.24 0.98	Mds. s. 37 20 27 30 17 25	Mds. s. 30 39 22 15 17 39

Size of stack.	Probable value of the outturn per acre.	REMARKS.
1	2	3
46 feet round and 6 feet high ...	Ra. A. 38 12	The value of straw has not been taken into account. This experiment was conducted under the supervision of an English-knowing muharrir who is trustworthy.
39 " " 4½ " ...	28 0	
36 " " 6 " ...	23 8	

The results of one experiment can show little or nothing as to the average outturn per acre for the whole estate, and now that the settlement has been concluded, the raiyats will probably let the experiment be made which will be continued for some years in order to ascertain the average yield for the estate. For the present report I have, however, to make a rough estimate, which I base partly on the results of the one experiment given above and partly on the return sent in by a tolerably trustworthy mustagir, showing for village Noorgaon, Elakah Kerara, the outturn of unhusked paddy for an acre of—

	Mds. s.
1st class at ...	16 21½
2nd " ...	13 5
3rd " ...	13 5

and average for an acre, at 14 maunds 10 seers, and also on my own seven years' experience; and I estimate the average outturn of unhusked paddy per acre for the whole estate at 15 maunds, valued at Rs. 18. PAGE 1.
CHAP. XIII.

96. *Dalus* crop is not regularly grown, and in 1890, when the estate was surveyed, there were only 13 acres under it. In

Dalus rice crop. years of severe floods causing considerable loss of *saradh* and *beah* crops, it is more largely grown, and is then very welcome. It is grown on alluvial lands, the banks and beds of creeks and other low places, which are either flooded by fresh tide water or admit of artificial irrigation. Lands intended for this crop are first enclosed by ridges in order that water may be retained, let in or let out as desired, and are ploughed when covered with water. Altogether some six or seven ploughings are given, and the earth is puddled into mud, and after weeds are removed the fields are ready for transplanting. Seedlings are raised in nurseries, as in the case of the *saradh* crop, and transplanted in December or January. This crop is not raised by sowing broadcast, nor is any manure applied to it; but it has to be irrigated several times. It ripens from March to April, and is reaped and harvested as other paddy crops are. There are special varieties of rice grown as *dalus*, and last year's seed is sown in the preceding autumn, and the seed so produced is used for its cultivation in the following winter. The outturn of this crop, when favourable, is nearly the same, if not more, than that of *saradh*, but its cultivation is more expensive and troublesome, and it is liable to be much damaged by strong winds.

Different species of rice grown in the estate.

97. The different species of rice grown in the estate are given below—

Beah

Fine—

(1) *Bakri-beah*, (2) *Pia* and (3) *Raigiri*.

(1) *Lajukbadan*, (2) *Nikabati*, (3) *Bananganthi*, (4) *Tulashiful*, (5) *Sarukajala*, (6) *Nangurd*, (7) *Nrupatibhog* and (8) *Dewanbhog*.

Saradh

... Middleling—

(1) *Geti*, (2) *Nemain Champaiedli*, (3) *Pendagari*, (4) *Nariyful*, (5) *Kajalgohira* and (6) *Balarami* (resembling *balam* of Backergunge).

Coarse—

(1) *Champaiedli*, (2) *Dhurd*, (3) *Boulahenda*, (4) *Rabana*, (5) *Lanka*, (6) *Belandi*, (7) *Shola*, (8) *Mardaraji*, (9) *Kusola*, (10) *Rangi*, (11) *Panikoili*, (12) *Henda*, (13) *Burhamunda*, (14) *Poruamara*, (15) *Chakra-kunda*, (16) *Jarmugdi*, (17) *Bahamugdi*, (18) *Barapanka*, (19) *Bangi*, (20) *Kakmula*, (21) *Bhalunki*, (22) *Narsinha*, and (23) *Hirakani*.

Dalus

(1) *Bakri-dalus*, (2) *Pia*, (3) *Raigiri* and (4) *Brahmanbai*.

98. *Rabi* and other crops are grown to a limited extent, and a full description

Rabi and other crops.

of their cultivation does not seem necessary to be given in this report. *Rabi* crops, such as *birhi*,

mung, barley, wheat and *khass* (oilseed), follow *beah* or the *laghu* variety of *saradh* crops, and are generally grown along river banks usually receiving fresh deposit of silt every year. Fields are ploughed three or four times, are then sown, and are irrigated when necessary. Excepting *birhi*, others are sown in January and reaped in April, and *birhi* is sown in September and reaped in December. The average cost and the average yield per acre are for—

	Cost.	Yield.	Worth.
1. <i>Birhi</i> (<i>Phaseolus radiatus</i>)	Ra. 4	4 Mda.	Ra. 7-0
2. <i>Mung</i> (<i>Phaseolus mungo</i>)	" 6	3½ "	10-8
3. Barley (<i>Phaseolus mungo</i>)	" 5	4 "	8-0
4. Wheat (<i>Phaseolus mungo</i>)	" 7	4 "	10-0
5. <i>Khass</i> (oilseed) (<i>mungo</i>)	" 10	3 "	15-0

Insects and birds injurious to crops.

99. The following is a list of the insects and birds injurious to crops:—

LOCAL NAME.

REMARKS.

Raigi

Are small insects of short wings and of red colour (hence called *raigi*, red) and have very bad smell. Come in large numbers in August or September, and plants eaten by them bear no crops.

Kakmukhi

Are large insects having six or eight legs and are called *kakmukhi*, being of black colour. Appear in August and September and injure crops as the above.

PART I.	LOCAL NAME.	REMARKS.
1A.P. XIV.	<i>Jhintika</i>	Are large insects of red colour (resembling lacuats) with legs and wings. Come in large numbers in October or November and attack corns in ears.
	<i>Nauri</i> ...	Are of middling size and white colour. Come out of water and damage plants of paddy.
	<i>Biria</i> ...	Are small white insects. Rise from the earth in September and do some damage.
	<i>Haldigundi</i>	Are small insects of yellow colour, smell very bad, have wings and appear during September and injure crops.
	<i>Jowá</i> ...	Are small white insects and appear in September and injure standing crops.
	<i>Pant-charhai</i> and <i>Daha-charhai</i> .	Are water birds. Come in large numbers, first in June and July, when they destroy seedlings in nurseries, and again in December when ripe corns are

CHAPTER XIV.

LIVE-STOCK, FODDER AND FUEL.

Live-stock. 100. From the survey records it is found that there were in 1890—

Sheep	...	...	164	
Goats	...	...	101	
Buffaloes	...	...	3,799	{ She-buffaloes 3,344. He-buffaloes 455.
Cows	...	...	23,982	
Bullocks	...	...	24,669	
Ponies	...	...	17	

and other domestic animals, such as cats, dogs, &c., 919.

Sheep, goats and ponies are few in the estate, and as they are not wanted by the people they are not kept in larger numbers.

101. The area of grazing grounds included in village areas is 18,579.95 acres, and there are immense pasture grounds in jungle blocks besides. Cows and bullocks are all confined to the arable tracts and seldom allowed a run over the meadows, in the jungles, as buffaloes are. In rural tracts, all the members of a village combine and arrange to graze the cattle thereof in one herd, the charge of which each member takes by turn, and this combination is often made use of to coerce its recalcitrant members by excluding their cattle from the benefit of associate arrangement for pasturage. Early every morning the cattle of each village are driven to the commons in the neighbourhood, and are brought back in the evening, when each owner takes his own and houses them in his own sheds. On rainy and stormy days they are generally not allowed to graze out, and during the floods, when the whole country is under water, they seldom have room for grazing. There are, as already stated, 23,982 cows and 24,669 bullocks, and the area under pasture is 18,579.95 acres, and the area available for each animal, on an average, is a little over one-third of an acre, and this allowance is, of course, insufficient. The cattle do not, however, entirely depend upon pasture; they get some straw at night; and bullocks in working season and cows in milk get some cooked food, consisting of rice cleanings and sometimes grain besides. Paddy straw is rather innutritious, and grasses, which are never cultivated, dry up in summer, and on the whole the fodder supply for the cattle in the estate is inadequate, and the result is that the cattle here are generally weak and dwarfish, and present an appearance of being ill-fed and ill-nourished.

102. Buffaloes are usually kept in jungle blocks besides. Cows and bullocks are all confined to the arable tracts and seldom allowed a run over the meadows, in the jungles, as buffaloes are. In rural tracts, all the members of a village combine and arrange to graze the cattle thereof in one herd, the charge of which each member takes by turn, and this combination is often made use of to coerce its recalcitrant members by excluding their cattle from the benefit of associate arrangement for pasturage. Early every morning the cattle of each village are driven to the commons in the neighbourhood, and are brought back in the evening, when each owner takes his own and houses them in his own sheds. On rainy and stormy days they are generally not allowed to graze out, and during the floods, when the whole country is under water, they seldom have room for grazing. There are, as already stated, 23,982 cows and 24,669 bullocks, and the area under pasture is 18,579.95 acres, and the area available for each animal, on an average, is a little over one-third of an acre, and this allowance is, of course, insufficient. The cattle do not, however, entirely depend upon pasture; they get some straw at night; and bullocks in working season and cows in milk get some cooked food, consisting of rice cleanings and sometimes grain besides. Paddy straw is rather innutritious, and grasses, which are never cultivated, dry up in summer, and on the whole the fodder supply for the cattle in the estate is inadequate, and the result is that the cattle here are generally weak and dwarfish, and present an appearance of being ill-fed and ill-nourished.

103. The average daily yield of milk for buffaloes is 2½ seers, and for cows 1 seer of 80 tolas.

104. All pastures included in village areas are free, and cattle are therefore grazed without charge on village commons; while a small charge of 4 annas per head is made for grazing buffaloes in jungles, the entire of which is estimated at 30,000 acres.

105. There is plenty of firewood in the estate jungles, and the charge for consumption per family is limited to 4 annas a year; but the people as a rule prefer dung-cakes for cooking their simple meals. They know full well the value of farmyard manure, and use it where they can, especially in seed-beds; but to ordinary fields subject to annual floods, they do not think it worth their while to apply any, and I cannot say they are far wrong. The practice of using dung-cakes as fuel in all rural tracts is almost universal, and I am of opinion that it will not change so long as mode of living has not materially improved.

106. The following is a list of the principal diseases to which cattle and buffaloes are generally liable:—

LOCAL NAME.	REMARKS.
<i>Phatud and Ohaud</i> ... } Foot-and-mouth disease }	These two are separate but similar diseases: the first affects parts of hoofs and lasts for about a week; the second affects entire hoofs and lasts for about two weeks: neither is fatal except in rare cases.
<i>Turkd</i> ...	Affects entire body, giving pain all over, and is mostly fatal.
<i>Suai</i> ...	Affects palates, causing two perforations therein, and is rarely fatal.
<i>Basanta</i> (cow-pox) ...	Is a blood disease proving fatal in most cases.
<i>Tantikata</i> ...	Affects principally the neck which gets swollen; is a serious disease, and generally fatal.
<i>Ghumd</i> ...	Is not a serious malady and rarely fatal; cattle affected keep their eyes closed, and hence the name <i>ghumd</i> (sleep).
<i>Ghoramunhd</i>	Is generally fatal, and is brought on by exposure to excessive cold.
<i>Chhot-tarkd</i>	Is a simple disease lasting two and a half days during which food is refused, but no serious evil is caused.
<i>Mooskd</i> ...	Is a serious and generally fatal disease, affecting mouth and neck which swell up; 90 per cent. of cases end in death.
<i>Bengd</i> ...	Affects throat and lasts about a fortnight, during which food can with difficulty be taken; but is generally not fatal.
<i>Ahala</i> ...	Affects the extremities of jaws which get swollen, and is easily cured by the application of salt to the swollen parts cut open.

NOTE.—Excepting *Basanta* (cow-pox), all the rest are brought on by exposure to cold, and occur therefore during the cold months and seldom in the dry months. All are said to be more or less contagious.

CHAPTER XV.

GENERAL CONDITION OF THE PEOPLE.

107. There is little doubt but that the condition of the people is improving, though evidences are few. This change for the better dates from the opening of the Chandbally port in 1871, before which traffic was limited and not sufficient to carry off the surplus produce of favourable or even of ordinary years, and local markets used to be glutted, and prices were low. The people had thus not full return for their produce, and their general condition was low and stationary. The case at present is different. The steamer service between Chandbally and Calcutta allows no accumulation of surplus; the operations of traffic are now amenable to the laws of supply and demand; the market prices are fair and steady, and the resultant change in the condition of the people is one of general improvement. The port has not only furnished a ready market for the disposal of surplus produce, but it has brought piece-goods and other necessities and even luxuries within easy reach; has introduced merchants and traders willing and able to advance money, and has infused some life among people listlessly idle and apathetic. There was a very poor crop last year, the excessive rainfall of May that year and subsequent floods having caused considerable loss almost all over the estate; but in spite of this the raiyats paid up their new settlement rents almost in full in one or two instalments. This prompt realization of new and

PART I.
CHAP. XV.

enhanced rents in a year of poor crops may be taken as some evidence that the people are in fair condition, or that they have credit consequent on their generally well-to-do circumstances.

108. Depending, however, as almost the entire population does on one sole crop of winter rice, unaccustomed as it is to lay by for future contingencies, prone as it is to be very lavish of expenditure on social and religious ceremonies and festivals, the condition of the people, generally, is seriously affected by the failure of crops from climatic abnormalities. From its position as a sea-board estate it is fully exposed to the fury of the monsoons, and the people have to live in one continuous fear of cyclones, sea-waves, floods or drought until crop has ripened and has been reaped. In spite of this uncertainty the people have not learned to be prudent, and with the seasons their condition varies from extreme want to demoralizing plenty.

109. The cost of ordinary living is not much: the food consumed is of the coarsest and the cheapest kind; the wearing apparel worn is of the poorest description and just sufficient for decency; the house accommodation is of the most primitive kind; the furniture and utensils are rare, and the general habits are untidy and slovenly. The people, though living in such severe parsimony, are nevertheless very unthrifty and lavish on social festivities and religious ceremonies. These extraordinary expenses, which somehow always exceed the most careful estimates, involve them generally in debts, to clear which most elaborate efforts are made and often made in vain. They are ignorant and very much priest-ridden. No ceremony can be performed without the aid of the Brahmans, whose covetousness is limitless.

Ceremonies.

110. There are a great many ceremonies performed in the estate, and a list of them is given below—

- (1) *Janmadina* or birthday ceremony.—It is observed on the day of birth either of male or female child. On this day presents are given to Brahmans and others for blessing the child, and the village astrologer is invited for noting down the exact time of birth in order to draw out the horoscope on the sixth day. The birthday is annually observed.
- (2) *Panchocoati* or fifth day ceremony.—This day sweetmeats are distributed among relations and neighbours.
- (3) *Santhi* or sixth day ceremony.—It is held in honour of the goddess *Santhi*, who is believed to have some influence over human destiny. Offerings are made to the goddess and cakes distributed among relations and neighbours. The horoscope of the child is drawn out this day.
- (4) *Bararatra* or twelfth day ceremony.—This ceremony is held for a female child on the twelfth night after birth, when *pūja* is held for the purification of the members of the family.
- (5) *Ekotsa* or twenty-first day ceremony.—Is held for a male child and is similar to the twelfth day ceremony.

Purification ceremony is held either on the twelfth or twenty-first day according as the child is female or male. In connection with this ceremony there are usual offerings made to the village gods and goddesses, and relations and neighbours are entertained with whom presents are exchanged. The child is visible to outsiders after this ceremony.

- (6) *Annaprasan* ceremony.—This is held some time between the seventh and ninth month after birth, when the child, male or female, for the first time takes rice. There are usual offerings, feasts and exchange of presents with friends and relations.
- (7) *Karnabhed* or ear-boring ceremony.—This ceremony is held between the fifth and the ninth year, when the child, male or female, has his or her ears bored, and there are usual offerings and exchange of presents.
- (8) *Bidyadambha* ceremony.—Only well-to-do people observe this, when education of male child is commenced generally between the fourth and the sixth year.
- (9) *Namakaran* ceremony.—This is held for the purpose of having the child, male or female, initiated by their spiritual *gurus* into matters religious. This ceremony is performed some time before marriage, no time being fixed for it.
- (10) *Brata* ceremony.—Is held in order to have the male child invested with the sacred thread. It is, however, confined to the Brahmans, the Kshatriyas, the Rajputs and the Baisyas. The Khandaits also wear this thread, but they generally do so without going through any particular ceremony. This is an expensive ceremony for the Brahmans for whom it is obligatory. It is generally held some time between the ninth and the thirteenth year of age.

111. The Indian society insists on the marriage of each male and female, and it is not optional as in the civilized countries of Europe and America. Rich and poor, all have

Marriage.

to get married, and among the Hindus it is a religious institution rather than social. Child-marriage prevails among the Brahmans only, who are liable to ex-communication if a daughter attains puberty before marriage. Other castes of the estate are not so bound, and marriages among them generally take place after the girls are of age, except those who to obtain spiritual benefit make what is locally called *kanyadan*, i.e., free gift of infant daughters.

The girls' parents in this estate generally get paid what is called "*Kanyad-sund*," a certain amount for expenses incidental to marriages, and the question of expensiveness of girls in this estate has not assumed that difficult stage which it has done in Bengal. A bridegroom has to pay a decent sum, according to his means, before he can marry, and this exerts some check on improvident marriages, and also teaches young men habits of thrift. As soon as marriage is over, the bride, if grown up, goes to her husband's house, from where she is seldom brought to her father's except on occasions of marriage and such like events. Non-adult wives stay with their parents until they attain puberty, when they are taken to their husband's home where the re-marriage ceremony is performed before the couple live as man and wife.

112. Widow-marriage is freely practised in the estate, except by the Brahmans, Karans, Banias and some extra respectable

Widow-marriage.

Khandaits. The usual practice is for the young

widow to marry her husband's younger brother, and failing him she marries out of the family. No man can, however, take a widow for a wife until he has married an unmarried girl, and this restriction is wholesome, considering that, according to religion and custom, every girl has to be disposed of in marriage, and under this restriction widows do not deprive unmarried girls of husbands. For people steeped in ignorance and prejudice, it is refreshing to find them so far above prejudices against widow-marriage which is responsible for a great deal of evil among people of other places.

113. *Sradh* ceremony is performed on the eleventh day after the death of a member of a family. The whole family whereof

Sradh ceremony.

one member dies is regarded impure for the first 10 days after death, and on the 11th day a ceremony of purification called *prayaschitta* is performed, when the Brahmans are fed and the customary presents are exchanged with relatives and neighbours.

114. The people of the estate perform no religious ceremonies at their homes except those who have *thakurs* in the house.

Religious festivities.

Those men observe the *Hori* festival, in which others, not having their own *thakurs*, also join. During the festival, the *thakurs* come in procession with music and dancing, for which village boys and young men are regularly taught, and meet in some central place, and the meeting is called "*melon*." In this connection some theatrical entertainments, primitive and rustic, are also given. On these occasions I have found them full of wit and humour. In a mufassal part of the estate I was once able to witness their rude performances, in which a *chaukidar* was depicted, police oppression exhibited, and the abuse of *rasad* system illustrated, and the performance was by no means one to be despised. Another religious festival is the *Saptaha Bhagabat*, which is held for seven days, during which *Srinat Bhagabat*, a religious book, is read out, and on the last day Brahmans, religious mendicants, and others are feasted. The expenses incidental to this seven days' religious meeting are defrayed by subscription raised among one or more villages.

115. I have already said that the food of the people is poor. Their ordinary food consists of rice, salt and greens.

Food.

Meal is ordinarily cooked once in the evening and is served hot but at night, and the unconsumed rice is mixed with water and left over for next day's meal, and the mixture is locally called *pakhal*, which is eaten with greater relish when slightly sour, with salt and some easily procurable vegetables. Quite 99 per cent. of the people have no meals served hot during daytime, and only old men and children among well-to-do families are so served. There is nearly always a little plot of garden land attached to each dwelling-house, where some country vegetables are grown, which are used on

PART I. occasions. In the rains the people catch their fish, part of which they consume
CHAP. XVI. and part they dry and preserve for future use. Brinjals also they dry, and dried fish and brinjals, and sometimes red pumpkins, form their reserve stock. Chillies and turmeric are almost the only condiments used, and salt and tamarind serve as relish for the poor meals of the poor as well as of the well-to-do. Rich people are few in the estate, and their mode of living differs very little from that of their poor brethren. As rice forms the only expensive item of the meals of the people, and as this crop is the staple crop of the country, the dietary is comparatively inexpensive.

116. The dress of the people of the estate is severely simple. The males, for ordinary wear, have two small *dhoties* (waist-band) of local manufacture costing about Re. 1; two *gamuchhas* (scarfs of cotton) costing 8 annas; for occasional use one *dhoti* of English manufacture costing 12 annas, and a *chadar* (cotton shawl) costing 6 annas. They have besides one sheet for winter use in addition to the *hens* or mats of their own make. For women are required two *saris* at Re. 1-6 each, two *dhoties* at 10 annas each. The well-to-do people are now commencing to use shirts and coats, and in winter cotton or woollen shawls, and some have taken to wearing country-made shoes. Umbrellas are largely coming into use.

117. The dwelling-house of an ordinary raiyat costs very little. The estate jungles supply nearly all the requisites for house-building, and thatching straw and labour are their own. Bamboos are brought from distant places, and are used in villages far from jungles and by the well-to-do, who construct comparatively good-sized and strong houses.

118. After the harvest in January and February, the raiyats fetch their firewood and other jungle produce, repair their houses and do miscellaneous work. Agricultural work is commenced as soon as there is rainfall, and ploughing, sowing and transplanting occupy all their time till September, after which they have slack time till December, when they fetch their second supply of firewood, &c. People living near about Chandbally do cooly's work. As a rule the people of the estate are inclined to be idle and depend entirely upon their rice crops. The women do husking, cooking and other household work, but no field work. They make cowdung cakes for use as firewood. Those of low castes and of the poor families of Khandaits and Chasas do marketing and trading, and a few widows are thus able to eke out a poor living.

119. In the matter of education the estate is very backward. There are now three estate schools in it costing annually some Rs. 1,200, but these institutions are not fully availed of. Besides, the estate pays Rs. 950 to the District Boards of Cuttack and Balasore for primary education, but how the money is spent the estate is never informed.

For the Brahman boys of the estate a Sanskrit *tal* has recently been established, and 15 boys have been allowed scholarships at Rs. 3 a month each. This institution will, it is hoped, keep alive Sanskrit learning and stop further sinking of the Brahman population to the level of the cultivating castes.

CHAPTER XVI.

PRICES AND WAGES.

120. A statement showing the prices-current in the estate during the years 1863 to 1893 is hereto annexed. These are the prices at which the Laccadive and Maldive men have been regularly purchasing rice and paddy from the northern portion of it, where they have generally been higher than in other parts. From this statement it will be seen that there is considerable difference between the prices prevailing before and since the famine of 1866. This province was more or less left to its own resources until the famine, when its wants came to be known, its isolated position understood, and its natural resources developed. Now, the canal system and steamer service between False Point and Chandbally and Calcutta have

rendered any sudden and considerable rise of prices well nigh impossible. Part I. There is even now some rise and fall, due to the state of crops from year to year Chap. XVI. here and elsewhere, but the oscillation in prices is confined to narrow limits:-

YEAR.	PRICE PER MAUND OF—			REMARKS.
	Paddy.	Coarse rice.	Fine rice.	
1	2	3	4	5
	Ra. A.	Ra. A.	Ra. A.	
1863 ...	0 5	0 10	1 2	Famine year.
1864 ...	0 6	0 11	1 3	
1865 ...	0 5	0 10	1 2	
1866 ...	0 10	1 4	2 4	
1867 ...	0 10	1 4	1 12	
1868 ...	0 9	1 2	2 0	
1869 ...	0 9	1 2	2 4	
1870 ...	0 9	1 2	2 4	
1871 ...	0 8	1 0	1 12	
1872 ...	0 8	1 0	2 0	
1873 ...	0 11	1 6	2 8	
1874 ...	0 11	1 6	2 4	
1875 ...	0 11	1 6	2 2	
1876 ...	0 10	1 5	2 2	
1877 ...	0 10	1 5	1 14	
1878 ...	0 11	1 6	2 4	
1879 ...	0 12	1 9	2 0	
1880 ...	0 12	1 9	2 4	
1881 ...	0 12	1 10	2 4	
1882 ...	0 13	1 11	2 10	
1883 ...	0 13	1 12	2 8	
1884 ...	0 13	1 12	2 3	
1885 ...	0 12	1 9	2 2	
1886 ...	1 0	2 0	2 6	
1887 ...	0 13	1 11	2 0	
1888 ...	0 12	1 9	2 5	
1889 ...	0 13	1 11	2 8	
1890 ...	0 12	1 10	2 4	
1891 ...	0 14	1 12	2 6	
1892 ...	0 13	1 10	2 4	
1893 ...	1 0	2 0	2 8	

121. The wages of agricultural and other labourers have risen with the price of paddy, as the quantity of allowance in kind has remained the same. In cases of money wages there has been increase of 30 per cent. A day labourer used to get, at the beginning of the last settlement, $1\frac{1}{2}$ annas, and now he gets 2 annas. The coolies at Chandbally employed in loading and reloading get higher wages,—some 4 annas a day, but this is exceptional. Coolies are rarely wanted anywhere in the estate, and even the number of agricultural labourers has considerably decreased, the landless classes having acquired land of their own. Most of the tenants need no help, except occasionally, during the cultivation season. Only some well-to-do tenants and mustagirs require and engage regular labourers.

The labourers in this estate may be divided into three following classes:—

- (1) Permanent labourers engaged by the year;
- (2) Permanent labourers employed for three to six months during the cultivation season; and
- (3) Occasional day labourers.

The permanent labourers of the first class are paid Rs. 15 to Rs. 24 a year, against Rs. 12 to Rs. 15 which they used to get before. They receive half the amount of their yearly allowance the first day they enter into service, and the

PART I. balance is paid at the end of the year, when they have the option of terminating
CHAP. XVI. it. They are boarded and lodged free, and supplied with clothing costing over
 Rs. 3 a year.

The labourers of the second class are engaged during the cultivation season for three to six months, and their wages for the period varies from Rs. 3 to Rs. 12. During the period of their employment they get free board and lodging and are supplied with clothing worth Rs. 1-8. The wages fixed are paid half in advance and the balance on the termination of the period of employment.

The permanent labourers, whether engaged by the year or the season, generally borrow certain sums from their employers. No interest is usually charged, but the labourers cannot leave service so long as the loans remain unpaid, which are generally not repaid until the termination of the service. The labourers have their usual wages, board and clothing, and only in a few instances wages earned are set off against loans.

The labourers of the first class are mostly outsiders, generally unmarried young men, and those of the second class mostly poor low castes of the estate. Local labourers are sometimes allowed a small bit of land to cultivate on their own account, for which they have to pay no rent nor incur other expenses. There is, however, no recognized and fixed rule about this.

The day labourers are free to work with whomsoever they like. They work for the day and get their wages paid usually in kind. If allowed midday meals, they receive $3\frac{1}{2}$ seers of paddy a day, and if not, 5 seers of paddy. If any of these day labourers work regularly for any particular employers for six months together, they are paid at the end of this period about 5 maunds of paddy besides.

122. There are no skilled labourers in the estate, except carpenters and blacksmiths, and they receive 32 seers of paddy a year for each plough they make or mend. Outsiders holding land under cultivation in the estate and requiring the services of skilled labourers make especial arrangements for payment for the work done for them. The services of barbers and washermen are also paid for at the rate of 32 seers of paddy per annum for every family. Poor people generally pay at half of the above rates, and very poor ones are often exempted.

Part II. Fiscal History.

CHAPTER I.

BRIEF HISTORY OF THE ESTATE WITH AN ACCOUNT OF PREVIOUS SETTLEMENTS AND THEIR EFFECTS.

123. There is no authentic information available regarding the history of the estate previous to the British occupation of the province. From a *brochure* published by the late guardian of the late Raja in 1884, and from traditions in the estate, it appears that some time about 1200 A.D., a brother of the then Chief of Mayurbhanj, by name Bhujabal Bhanj, owing to a fraternal quarrel, left home and acquired by conquest a small territory in what is now known as Kanika. The place at the time was peopled by aboriginal tribes and ruled by a Raja of low caste, and Bhujabal Bhanj, having subdued this Raja, set up a reign of his own and thus founded the *Bhanj Raj* of this killah, the status of which was recognized by the Vishnuvite or Gajapati (Gangetic) dynasty of Orissa in the middle of the 13th century of the Christian era.

124. The killah originally consisted of what is now known as Elakah Chhamuka, to which the portion at present lying in the district of Balasore and called Panchmukah was soon added. Elakah Kerara was some time after acquired, probably by conquest, the date of which cannot now be fixed. The last Elakah Kaladwip and Elakah Chakra in Kujang were, till towards the close of the last century, held under a separate Raj known as *Harichandan*, the last Raja of which had two daughters, one of whom married Raja Balbhadra Bhanj of Kanika, and the other, the Raja of Kujang, and the two sons-in-law divided the principality between them; Kanika Raja taking Elakah Kaladwip and Kujang Raja Elaka Chakra. In addition to the four Elakahs mentioned above, Raja Balbhadra Bhanj was holding the pargana of Utikan* as a zamindari under the Mahrattas, when the province of Orissa was acquired by the British authorities, by whom he was, a year later, for various acts of oppression, deprived of this zamindari which, on appeal to the Governor-General in Council, was on the 30th August 1809 restored to him. This property did not, however, long continue in the family, for on the 4th January 1817 it was sold at Calcutta by the Board of Revenue for arrears of revenue which remained unpaid, while the two sons of the late Raja Balbhadra Bhanj were fighting for a division of the estate.

125. The seat of the Raj was at first at a place called Bajarpur, on the right bank of the Baitarni, about a mile and-a-half from its junction with the Brahmani, and was afterwards removed to Righagarh, on the right bank of the Brahmani, some two miles above its junction with the Baitarni. Righagarh is almost in the midst of jungle and close to Bhitara Kanika, which is ordinarily inaccessible, and the choice of this place for the seat of the Raj was apparently made in order to find a ready shelter in the jungles of Bhitara Kanika in the event of any sudden attack of the Mahrattas, the Muhammadans or the Rajas of Orissa; for the place itself, as seen at present, possesses few attractions.

126. The following succession list of the Chiefs of the killah since its foundation is reproduced from the pamphlet referred to above:—

Succession list.

- | | |
|------------------------|-----------------------|
| 1. Bhujabal Bhanj. | 8. Tribikram Bhanj I. |
| 2. Bishwanath Bhanj. | 9. Gangadhar Bhanj. |
| 3. Trilochan Bhanj I. | 10. Gopal Bhanj I. |
| 4. Gopinath Bhanj I. | 11. Basudeb Bhanj I. |
| 5. Paramanand Bhanj I. | 12. Raghunath Bhanj. |
| 6. Dibyasinha Bhanj I. | 13. Lakshman Bhanj. |
| 7. Narasinha Bhanj I. | 14. Bairagi Bhanj I. |

* [Vide Hunter's Statistical Account of Cuttack, page 127.]

PART II.
CHAP. I.

15. Trilochan Bhanj II.
16. Gopinath Bhanj II.
17. Paramananda Bhanj II.
18. Sarbasinha Bhanj.
19. Basudeb Bhanj II.
20. Dibyasinha Bhanj II.
21. Narasinha Bhanj II.

22. Tribikram Bhanj II.
23. Gadadhar Bhanj.
24. Gopinath Bhanj III
25. Dasarathi Bhanj.
26. Gopal Bhanj II.
27. Bairagi Bhanj II.
28. Balbhadra Bhanj.

127. The last Chief of Kanika, Raja Balbhadra Bhanj, was ruling the killah in 1803, when the Hon'ble the East India Company conquered the province of Orissa, which was soon after ceded by Peshwa Raghuji Bhonsla.

Treaty engagement with the East India Company. About this time, the Raja of Kujang* was detected carrying on correspondence with the Rajas of Kanika and Harishpur, with a view to enter into a triple alliance, offensive and defensive, against the British authority; but they were soon reduced to submission. On 7th December 1803, an *ekranama* was executed by the Raja of Kanika to the Hon'ble the East India Company's Special Commissioners for the Subah of Orissa, by whom a *kaolnama* or *sanad* of acknowledgment was granted in favour of the Raja. Both these documents are reproduced below:—

Treaty engagement executed by the Raja of Killah Kanika in Zilla Cuttack to the Hon'ble East India Company's Special Commissioners for the Subah of Orissa, Messrs. Harcourt and Melville.

I, Balbhadra Bhanj, Raja of Killah Kanika in the subah of Orissa, engage faithfully and correctly to abide by this engagement, entered into by me with the Hon'ble East India Company, as contained in the following clauses, to wit:—

CLAUSE I.—*I will always hold myself in submission and loyal obedience to the Hon'ble East India Company aforesaid.*

CLAUSE II.—*I will continue to pay, without demur, to the said Government as my annual peshkush or tribute 84,840 kahuns of cowries, in three instalments as specified herein below.*

CLAUSE III.—*I will, on demand to that effect, cause any person who is an inhabitant of the subah appertaining to the Hon'ble Company aforesaid, and who may have fled and come into my territory, to be forthwith arrested and delivered over to the Government.*

CLAUSE IV.—*Should any person, who is a resident in my territories, commit a crime within the limits of the Mogulbandi, I hereby engage, on demand to that effect, to cause such person to be arrested and delivered over to the Government authority. Moreover, I further bind myself, in cases where I may possess any claim or demand on one who is an inhabitant of the Mogulbandi, not of my own authority to enforce such claim, but I will notify the same to the constituted authority, and will act in accordance with such orders as may issue from him.*

CLAUSE V.—*I engage that whenever the troops of the Hon'ble Company's Government shall pass through my territories, I will direct the people of my killah to supply, to the extent of their capability, all rasad and supplies, which shall be sold at fair prices. Further, I will on no manner of pretext whatever ever stop, or detain, or offer any let or hindrance to any subject of the Hon'ble Company's Government or to any other person whatsoever, who may be proceeding by land or water, with goods or orders or with any parwana on the part of Government, through my boundaries, and will rather take care that no loss or inconvenience shall befall such parties, in life or goods.*

CLAUSE VI.—*In case any neighbouring Raja or any other person whatever shall offer opposition to the said Government, I engage, on demand and without demur, to depute a contingent force of my own troops with the forces of Government for the purpose of coercion, investigation and the bringing of such recusant into subjection to the aforesaid Government. Such contingent to receive only rations (or ration allowances) agreeably to the previously current practice, so long as they shall be present.*

These shall be the instalments of my peshkush, to be paid—

In the month of Chait	...	...	...	28,840 Kahuns.
Ditto Jaistha	...	...	...	28,000 "
Ditto Asark	...	...	...	28,000 "

(Sd.) Raja Balbhadra Bhanj.

Dated the 7th December 1803.

* [Vide Hunter's Statistical Account of Cuttack, page 199.]

The following is the *kaishnama* or *sanad* of acknowledgment executed to Raja Balbhadra Bhanj Bahadur of Killah Kanika by the Hon'ble East India Company's Commissioners for the subah of Cuttack:—

PART II.
CHAP. I.

We, Lieutenant-Colonel George Harcourt, commanding the victorious troops of the Hon'ble East India Company and Commissioner of the subah of Orissa, and John Melville, Commissioner of the same, appointed by the Most Noble the Marquis of Wellesley, Governor-General, for the settlement and pacification of the said subah, do on behalf of the East India Company execute this acknowledgment as set forth in the following paragraphs, to Raja Balbhadra Bhanj Bahadur, Raja of Killah Kanika in the said subah of Orissa.

CLAUSE I.—*The annual peshkash payable by the Raja for his rajgee of the said killah is fixed in perpetuity at 84,840 kahuna.*

CLAUSE II.—*No further demand, however small, shall be made on the said Raja or received from him as nazar, supplies or otherwise.*

CLAUSE III.—*The Government of the Hon'ble East India Company, it is well known, is ever gracious to those Rajas who are always loyal and obedient to them, and constant in the impartial administration of justice to all its subjects alike, and therefore in like manner extends the same impartiality to Raja Balbhadra Bhanj Bahadur and seeks always his prosperity and peace. Therefore any just representation or complaint made to the Government by the said Raja of Kanika will meet with a decision in accord with justice.*

*Dated the 22nd November 1803. } (Sd.) George Harcourt, Lieutenant-Colonel.
Sraban 6th, 1211. } (Sd.) John Melville.*

128. The status of the Chiefs of Kanika down to 1803 was more or less that of the semi-independent rulers of a small principality. They were in possession of full sovereign rights within the killah, and their allegiance to the Kings of Orissa, and subsequently to the Muhammadan and the Mahratta rulers of the province, was only nominal. The killah, situated as it is along the sea-coast, covered with dense jungle, must ordinarily have been difficult of access, and its Rajas must, of necessity, have been left very much to themselves. Since the occupation of the province by the British Power there has been a sad falling off in the status of the killah. In Regulation XII of 1805, the Raja of Kanika is described as a zamindar, his *peshkash* or tribute is converted into land revenue, and his rights, as a semi-independent Chieftain, practically extinguished. In return for the loss of rights and sovereign powers, the Rajas of this estate have, however, enjoyed protection against invasions to which it used to be subjected frequently in former times, and this protection may be said to be some compensation for the loss of their semi-independence.

129. The history of the estate from 1803 down to 1845 has been fully described in the Persian *roydd* of the settlement of the estate which was made under the supervision of the then Collector, Mr. Gilmore, and I give an abridged translation of its opening chapter:—

“From the time of the Mahrattas till 1210 *Amt* (1803), this killah was held by Raja Balbhadra Bhanj at a tribute of Rs. 581-1, and in 1804, when the province was occupied by the British Government, the Raja presented himself before the Commissioners for settling the affairs of Outtack and consented to the settlement of his zamindari of Killah Kanika, Karara and Kaladwip at an annual *jama* of Rs. 20,407-18-4, and on the 7th December 1803, executed an *ikarnama* and received a *kaolnama* from the British Government and paid revenue due for 1211 *Amt* (1804). In 1212 *Amt* (1805) some malpractices of Raja Balbhadra Bhanj having come to the notice of the British authorities, his killah was placed under *khas tahsil*, and the Collector of the district was charged with the duty of taking up all matters relating to it. The Raja was imprisoned for some time at Balasore and afterwards at Midnapore. About a year later was received an order from the Secretary to Government, dated the 7th May 1806, forwarded with the Commissioner's letter dated the 13th May, directing to release the Raja from imprisonment, and to restore to him his zamindari of the killah, and in accordance with the above instruction, the Raja was set free, and after the execution by him of an *ekarnama* and a *kisbandi* for the payment of *peshkash* for his killah, he was, on the 17th July 1806, reinstated in his zamindari.

“On the 6th *Aghran* 1220 *Amt* (1813), Raja Balbhadra Bhanj died, leaving two sons, Jagannath Bhanj and Haribar Bhanj, both of whom applied for the registration of their names in the place of their deceased father, and before any orders were passed on this application, a *reobakari* of the *Dewan Admlat* of this district, dated the 8th June 1813, forwarding copy of the *reobakari* of the Court of Appeal, Calcutta, dated the 28th May, and the orders of the Board

PART II. of Revenue of these provinces dated the 15th, and the *roobakari* of the Collector of this district
 CHAP. I. dated the 18th June 1818, directing registration of the name of Raja Jagannath Bhanj in respect of the killah and attached Mogulbandi zamindaris, having been received, an *ekrarnama* and a *kabuliyat-kistbandi* were, in accordance with the usual practice, taken from Raja Jagannath Bhanj, to whom a *kaolnama* and a *dakhalnama* were granted by the British Government. The younger son of the late Raja being dissatisfied, instituted a partition suit in the Provincial Court of Appeal, Calcutta, against his elder brother, Raja Jagannath Bhanj, and while this suit was pending the latter Raja induced his brother to agree to an amicable arrangement by which the former was to own and possess 8½ annas and the latter 7½ annas of the *rajee* and the zamindaris left by their deceased father, which were to be entered in the Collectorate of Outack in their joint names, and in accordance with the above amicable arrangement, and the *roobakari* dated the 3rd May 1816, Killah Kanika and the attached Mogulbandi zamindaris were, with a specification of shares, duly registered in the joint names of the two brothers who executed the usual *ekrarnamas* and *kistbandies* and became *Malguzardars* under the British Government. Raja Jagannath Bhanj having soon after died, leaving no sons, the name of Raja Harihar Bhanj was, under the *roobakari* of the *Dewani Adawlat* of this district dated the 1st March 1819, forwarding copy of the *roobakari* of the Commissioner of the Division, dated the 26th February, to the Court of Appeal, and the *roobakari* of the Collector of Outack, dated the 18th March 1819, recorded in respect of the 8½ annas share of the late Raja, and Harihar Bhanj thus became the sole proprietor of the estate.

"Some time after this, a *mukhtar* of Raja Harihar Bhanj sent a petition to the Collector, reporting the death of the Raja on the 4th *Bysakh* 1237 *Aml* (1830), the heirship of the late Raja's son Benayak Bhanj, aged 13 years, the succession of the minor to the *rajgeeship* of his late father under the guardianship of his mother Rani Satyabhama Patmahadei, and the carrying on of all the work of the *raj* by the minor under the above guardianship. Later on, Musammât Satyabhama Patmahadei presented a petition praying to be placed in charge of the killah as guardian of her minor son until that son's coming of age, Radhashyam Narendra, zamindar of Gopalpur, pargana Alti, standing surety for her. A copy of this petition with a letter in English, dated the 13th September 1830, was sent to the Commissioner, Circuit No. 19, with the recommendation that during the minority of Raja Benayak Bhanj, Killah Kanika might be placed as a leasehold under Satyabhama Patmahadei, with Radhashyam Narendra, zamindar of Gopalpur, pargana Alti, as her surety; that the aforesaid Patmahadei might be required to pay the amount of *peshkush*, to deposit a sum of Rs. 8,000 out of the profits of the estate with Government, and to defray all expenses on account of the *raj* and the support of the minor; that a tutor might be appointed by Government on Rs. 30 a month for the education of the minor and be paid by the aforesaid Patmahadei from out of the collection money, and that the Rs. 8,000 deposit, when made, might be yearly invested in Government Paper in the name of the minor, to whom the interest of the investment might be credited. These recommendations were accepted by the Commissioner, whose approval was communicated in his letter in English dated the 25th October 1830, and in accordance with the order contained in the above letter and the *roobakari* dated the 27th October 1830, an *ekrarnama* and *kabuliyat-kistbandi* on stamped paper were taken from Rani Satyabhama Patmahadei, with Radhashyam Narendra as her surety; a regular *patta* on stamped paper containing all the aforesaid particulars were granted by Government to her; a tutor was employed for the minor on Rs. 30 a month, and the name of Raja Benayak Bhanj was registered in the place of that of the late Raja Harihar Bhanj in respect of Killah Kanika and mauzas Chandanpur, etc., pargana Kismut-Kyema and a *kaolnama* of *rajee* and a *kabuliyat-kistbandi* were executed for two years, viz., 1238 and 1239 *Aml*. Rani Satyabhama Patmahadei paid *peshkush* and deposited Rs. 8,000 for 1238, and for 1239 to 1241 she only paid *peshkush*. On the 7th *Baisakh* 1241 *Aml*, the aforesaid Rani submitted a petition to Collector reporting that her son having attained majority, the estate might be released to him, and in accordance with the above request and the order contained in the *roobakari* dated the 25th September 1834, Killah Kanika was released from the charge of the Court of Wards, its lease to the aforesaid Rani was cancelled, a *kaolnama* and a *kistbandi* in the usual form were taken from Raja Benayak Bhanj, to whom

Raja

Narendra

the 16th July 1842 obtained a decree for the amount claimed, less by Rs. 12,000 set off on account of loss of crops."

130. Raja Benayak was barely 18 when he came into the possession of a vast estate. He is said to have been a very oppressive Raja, quite unlike his parents, but it seems to me that being young and inexperienced, he was unable to realize the great change which had been effected in the status of his killah, by reason of the settled form of Government which the Hon'ble the East India Company had established in the province. This change, though not fully realized by him, was, however, perceived by his people, and they began asserting rights which they would not have dreamt of doing half a century before. His own servants, the rent collectors, appear to have taken advantage of this change, and to have set the people against him. The rents, justly due, were withheld, and the estate could not pay its *peshkush*, for the realization of which it had to be attached several times between

1834 and 1843, and eventually the poor Raja was obliged to ask Government to take charge of his estate and bring his recalcitrant servants and tenants under control, and his application was sanctioned by the Board of Revenue in their No. 464, dated the 6th March 1843, and the *killah* for the first time came under the regular management of Government officials. Two years later, on the 5th April 1845, Raja Benayak Bhanj died, leaving two minor sons, Tribikram Bhanj and Padmanabh Bhanj, on whose behalf the charge of the estate was retained, and it was subsequently brought under the Court of Wards as sanctioned by the Board in their No. 688, dated the 13th April 1846, and remained under the Court till its release in 1849.

PART II.
CHAP. I.

131. During the period of the six years of Government management, a settlement was made which took two years to complete and was concluded for four years, 1845—49. A comparative result of this settlement, showing the rental under each tenure, according to the Raja's papers and the settlement under Government supervision, would be interesting, and it is reproduced in the following statement from the Persian *roydd* of 1845 :—

No.	Nature of tenure.	ACCORDING TO RAJA'S PAPERS.		ACCORDING TO SETTLEMENT, 1845-49.		DECREASE.		INCREASE.	
		Area.	Rental.	Area.	Rental.	Area.	Rental.	Area.	Rental.
1	2	3	4	5	6	7	8	9	10
1	Chandna ...	M. G. D. 13 2 0	Rs. A. P. 609 5 11	M. G. D. 323 7 7	Rs. A. P. 891 9 7	.....	.....	M. G. D. 214 23 7	Rs. A. P. 549 3 2
2	Thani ...	.....	.....	.....	.....	.....	.....	.....	.....
3	Pahi ...	.....	.....	.....	.....	.....	.....	.....	.....
4	Khamar ...	.....	.....	.....	.....	.....	.....	.....	.....
5	Paik Tonki ...	.....	.....	.....	.....	.....	.....	.....	.....
6	Jagir Tonki ...	.....	.....	.....	.....	.....	.....	.....	.....
7	Melak Tonki ...	.....	.....	.....	.....	.....	.....	.....	.....
8	Debottar Tonki ...	.....	.....	.....	.....	.....	.....	.....	.....
9	Brahmottar Tonki ...	.....	.....	.....	.....	.....	.....	.....	.....
10	Khairat Tonki ...	.....	.....	.....	.....	.....	.....	.....	.....
11	Pirottar Tonki ...	.....	.....	.....	.....	.....	.....	.....	.....
12	Munab Tonki ...	.....	.....	.....	.....	.....	.....	.....	.....
13	Resumed Tonki ...	.....	.....	.....	.....	.....	.....	.....	.....
14	Resumed Baramano or Mustagiri Jagira ...	.....	.....	.....	.....	.....	.....	.....	.....
15	Resumed Jagira ...	.....	.....	.....	.....	.....	.....	.....	.....
16	Resumed rent-free ...	.....	.....	.....	.....	.....	.....	.....	.....
17	Cultivable waste settled ...	.....	.....	.....	.....	.....	.....	.....	.....
18	Unsettled waste ...	.....	.....	.....	.....	.....	.....	.....	.....
	Total ...	66,678 30 2	66,014 2 2	1,11,220 6 8	1,123 5 8	0 30 9	.....	66,618 7 0	32,300 2 7
	MISCELLANEOUS.								
1	Fisheries ...	.....	408 4 5	.....	405 11 4	.....	.....	.....	3 6 11
2	Ayumu ...	.....	4 14 2	.....	5 2 2	.....	1 18 0	.....	.....
3	Fees for grazing buffaloes ...	.....	740 2 6	.....	847 9 5	.....	.....	.....	107 6 9
	Total of Miscellaneous ...	.....	1,148 5 1	.....	1,256 0 9	.....	1 12 0	.....	109 13 8
	Jungle settled for clearances.	.....	.....	.....	69 0 6	.....	.....	.....	69 0 6
	GRAND TOTAL ...	.....	66,162 7 9	.....	66,946 12 6	.....	1 12 0	.....	32,369 6 9

* NOTE.—*Ayumu* was something like *salami*, i.e., present which respectable residents of the estate used to make to Raja on certain occasions.

The total rental obtained at this settlement, amounting to Rs. 82,548-12-6, included over Rs. 12,000 on account of mustagirs' commission, while the rental, according to the Raja's papers, was exclusive of that commission, and the nett increase of rental was therefore about Rs. 22,000, and it was obtained principally by the settlement of *khamar* lands (3,000 *mdns*), culturable waste (9,000 *mdns*) and the resumption of service tenures (over 1,500 *mdns*).

132. This settlement expired in 1849, and Tribikram Bhanj, the eldest son of the late Raja, having attained majority, assumed charge of his estate with the sanction of the Board, conveyed in their No. 53, dated the 4th May 1849. This Raja had hardly established himself in the estate when he had to defend himself against his half-brother, Padmanabh Bhanj, who instituted a suit setting up a superior claim to succession, and this litigation lasted some seven years, and only ended with the death of the former in 1857, when the latter succeeded to the estate as next heir of the deceased. Raja Padmanabh Bhanj inherited a very embarrassed heritage. The litigation between the brothers and the mismanagement of the estate during its course had involved it in heavy debts. To extricate it from these debts, then amounting to over 9 lakhs of

PART II. rupees, Raja Padmanabh Bhanj applied to Government for the management of his estate for a period of ten years, and his application was sanctioned by the Board in their No. 30, dated the 25th March, and by the Government of Bengal in their order No. 252A., dated the 4th April 1862.

CHAP. I.

133. The estate thus came a second time under the direct management of Government, and the Collector was asked to arrange for a second settlement, the first having been made in 1843-45, and a few amins were sent out from Cuttack, and the measurement of a few villages of Panchmuka was commenced. Babu Nobin Krishna Sirkar, the then Subdivisional Officer at Jajpur, was asked to take up the work of settlement in addition to his own duties. He was succeeded, first by Babu Juggo Mohon Roy, and then by Babu Hariash Chandra Ghosh, both Deputy Collectors of Cuttack, and in about three years they had finished the settlement of some 39 villages, when the Raja, having been declared insane by the District Civil Court, the charge of his estate was assumed by the Court of Wards as sanctioned by the Board of Revenue in their No. 63, dated the 5th July 1865, and fresh arrangements were made for the completion of the settlement, and late Babu Sapneswar Dás was appointed Settlement Officer and *sarbarahkar* of Kanika.

Second settlement of the estate under Government management.

134. The late Raja Padmanabh Bhanj died on the 25th March 1891, and since then the charge of the estate has been retained on behalf of his adopted son, Nrupendra Nath Bhanj, who is now 13* years old, and it is thus likely to remain under the present management for eight years more. This boy is the third son of a sister of Rani Krushna Priya Patmahadei, and he was taken in adoption some time in 1884 by the late Raja and his wife in strict accordance with the conditions enjoined in the *Shastras*, and the adoption, as required by section 61 of the Court of Wards' Act IX of 1879, was, on a memorial dated the 14th June 1884, presented by Rani Krushna Priya Patmahadei, sanctioned by the Local Government in their No. ¹¹⁰³ L.R., dated the 18th December 1884.

Present proprietor.

135. Babu Sapneswar Dás joined the estate in August 1865 and worked hard and completed the settlement in six years, 1865 to 1871. His work was seriously interfered with, and for a time altogether stopped, by the great famine of 1866. His settlement was thorough: the whole of the cultivated and culturable portions were measured with rod of 22 *dasti padika* measuring 9 feet 6 inches; all claims to rent-free tenures and rent-paying tenures at fixed rates or rents were enquired into and settled; all *sanands* were examined and invalid tenures resumed; all rights and status of the different classes of tenants were determined, and rents for all the holdings were recorded in accordance with the rates fixed with due comparison with those prevailing in the adjoining estates. The total rental for the estate, including miscellaneous sources of income, obtained at the settlement, was Rs. 1,08,728-6-1. This rental was, however, never realized. The famine of 1866 caused the death of many people and the abandonment of much cultivated land, and the rent-roll was affected to such an extent as practically to upset the settlement; but all subsequent arrangements for settlement have, however, been based on the papers and the records prepared at it.

Settlement of 1865-71.

136. In 1871, when the people had recovered, to some extent, from the effects of the famine, a two-year settlement† was made with the mustagirs, which was continued by Mr. Macpherson, the then Collector, for two years more, up to 1874. This was followed by a five-year settlement concluded by Mr. Beames, under Board's orders conveyed in their No. 25A., dated the 2nd March 1874.

Revised settlements from 1871 to 1890.

At this settlement no measurement was attempted, and the only change made was the exclusion of a few villages from the rent demand, the rents of which were being regularly remitted.

137. During the currency of Mr. Beames's five-year settlement, considerable quantities of fresh land having been brought under cultivation, a revision of that settlement was considered desirable, and Mr. Nolan, the then Collector, submitted the following

Last settlement.

* Born on 21st November 1881.

† The nett rental for each year from 1865 to present year is given in paragraph 174 below.

proposals which were approved by the Board in their Nos. 2126 and 300A., dated the 28rd September and the 20th November 1879, respectively:—

PART II.
CHAP. II.

- 1st.—That the new settlement be made for five years commencing from the expiration of the term of the last settlement, viz., from 1879-80. The term of 5 years was raised by the Board to that of 10 years;
- 2nd.—That it be concluded like the last settlement with the mustagirs after giving *pattas* to the raiyats;
- 3rd.—That the form of engagement to be taken from mustagirs, to define their position and to contain provisions forbidding their enhancing rents and requiring them to grant cheque receipts for rent payments and to offer favourable terms for the reclamation of jungles;
- 4th.—That the rates fixed at the settlement of 1865-71, i.e., existing ones, be maintained, and favourable rates be offered to encourage the reclamation of jungles;
- 5th.—That the settlement be founded on actual measurement with regard to 8,740 *mans* in the 171 villages in which remissions were being largely granted, and the rest of the estate be settled with reference to the mustagirs' accounts and the papers of the previous settlements with occasional enquiries and measurements; and
- 6th.—That the settlement be completed within six months and Rs. 3,665 be sanctioned for the cost of establishment.

Instead of 171 villages, 256 villages had to be fully measured, and enquiries and occasional measurements to ascertain extension of cultivation had to be made in 348 villages besides, and the settlement, instead of taking six months, actually took two years to complete, and the cost of operations, instead of being Rs. 3,665 as originally estimated, amounted to Rs. 19,046. The settlement, however, resulted in substantial increase of rental.

CHAPTER II.

RIGHTS OF THE DIFFERENT CLASSES OF TENANTS.

138. Prior to the occupation of the province by the British Power, when the Rajas of the *killah* were, as shown above, practically independent, when they had armed retainers at their beck and call, when their sweet pleasure constituted law, and when the prevailing notion was that subjects were created for the comforts and the conveniences of sovereigns, the rights of tenants against the Raja were, as may be imagined, *nil*.

139. After the occupation of the province by the British Power, the subordinate local officials and the tenants came to feel that there was a power higher than that of the Raja, and that they could seek redress from the former against the high-handed proceedings of the latter; but no violent measures appear to have been taken till Raja Benayak Bhanj assumed charge of his estate, when they began forming combinations which eventually led to the estate coming under Government management, as explained in paragraph 130 above. The estate remained under that management for six years, during which a settlement *royddé* was prepared, in the 7th chapter of which the rights of tenants are discussed and a translation of it is given below:—

"In this estate there are 4,313 *thani* raiyats, 2,862 *chandna* raiyats and 6,868 *packs*.

CHAPTER VII.

Regarding rights of *thani* raiyats, holders of *chandnas* (homestead) lands and *packs*.

The *thani* raiyats, so long as they cultivate their lands included in their *kabuliya*, will continue to reside in their homes or else the Raja will turn them out. The *chandna* raiyats are to reside in their homes, to pay their rents and to attend when called by the Raja for any work, or else they will be turned out without delay and others settled in their places. The ancestors of *packs* were land, rent-free, for residence, and besides this, some had obtained from 10 *bighas*, some 20 *bighas* and some 12 *bighas* under *tonkt* tenures at fixed quit-rent, which they were holding and possessing. In the event of any war taking place during the time of the Moguls and the Marhattas, they had to be ready, with the permission of the then Raja, to fight with the enemies. Since the province of Orissa has come under the Government of the British Company Bahadur (East India Company is of course meant) which has introduced peace in all the *killahs*, the dependants of the old *packs* who are holding

PART II.
CHAP. II.

lands granted in former times are rendering inferior services, such as carrying straw and thatching houses from time to time as wanted, and any one of them who fails to attend when required by the Raja to do so, is at once turned out of his house and home and is dispossessed of his *tonki* tenures, which are given to another person who is appointed in his place. The *paaks* have no rights whatever in respect of their homestead and cultivated *tonki* lands, and never had any. On condition of their rendering service they are in possession of their tenures."

The raiyats, as appears from the above, had acquired no rights till 1845. The *thani* raiyats were in possession of their lands so long as they cultivated them, and were liable to be turned out if they neglected to do so. They had some semblance of occupancy rights, but the others, namely, the *chandna* raiyats and the *paaks*, had none. Nothing is said about the *pahi* raiyats, but in the *jamabandi* prepared at the settlement, 5,148 *masas* are recorded as held by them. They, too, had apparently no rights. Nothing is stated about the rights of the tenure-holders, such as the holders of *brahmottar*, *debottar*, *khusbas* and other similar tenures, but these having been created by the Rajas, were probably respected by them.

From 1849 to 1862 the estate was in the *khas* possession of Rajas Tribikram Bhanj and Padmanabh Bhanj, and during this period no advance was probably made in the status of tenants, and no valuable tenant-rights appear to have been acquired till the estate came a second time under Government management in 1862.

140. The following classes of raiyats and holders of different kinds of tenures were recognized in the settlement 1865-71, and their rights and status were then determined:—

Rights of tenants as recorded in the settlement of 1865-71.

- | | |
|--|--|
| 1. <i>Thani</i> raiyats. | 6. Holders of <i>Brahmottar</i> tenures. |
| 2. <i>Chandna</i> raiyats. | 7. " " <i>Khairat</i> " |
| 3. <i>Pahi</i> raiyats. | 8. " " <i>Datta-Anugraha</i> " |
| 4. Holders of <i>Debottar</i> tenures. | 9. " " <i>Melak</i> " |
| 5. " " <i>Pirottar</i> " | 10. " " <i>Service</i> " |

In the *royddi* of that settlement, when Act X of 1859 was in full force, the following expression occurs regarding the rights of raiyats in Kanika:—

"The raiyats, i.e., *thani*, *chandna* and *pahi* (some of the *pahi* being resident of adjoining estates), have merely the right of cultivating the lands held by them, and so long as they cultivate their lands and pay their rents regularly, it is not within the power of any one to deprive them of their lands or increase the rents fixed in the settlement until the expiration of its term."

At this settlement all the raiyats were clubbed together, and their rights to hold and cultivate their lands, undisturbed, during the currency of the settlement, and by implication those of the heirs of the recorded tenants, were recognized. It is not clear if they were liable to be ejected for non-payment of rents during the currency of the settlement, but it is evident that at the expiration of its term, all their rights were terminable, and they were, to all intents and purposes, tenants-at-will holding under leases for fixed terms.

The rights of the holders of proprietary tenures* were enquired into at the settlement, but they do not appear to have been properly settled. The *sanands* creating them are translated below, from which some idea can be formed regarding the rights of the holders thereof:—

(1) *Specimen sanand for Debottar tenures.*

"To—Samudreshwar Mahadeb.

anted to you, one *bati* (20 *masas*) of rice land in Muka Ghanteswar and a mango *tope* are placed at the disposal of Lokenath Panda. He will cultivate or cause to be cultivated all this land, and by presenting offerings will make the said *thakur* enjoy this land so long as the sun and the moon exist, and pay no *tonki* or anything of the kind. The mango fruits of the orchard will be offered to the *thakur*, and besides these, the tank and the plantain garden are also dedicated to the *thakur*."

(2) *Specimen sanand for Pirottar tenures.*

"In the name of Jamadar Kámu Khán.

It is hereby ordered that for offerings to Imam Sahab of Paramanandpur, the 3 *masas* of land held by Kanhá Khán, a plot of homestead and 3 *masas* out of *Kothparia* (i.e., *rajsarkar* waste), total 6 *masas*, are granted to you free of rent. You will cultivate or cause to be cultivated all this land. You will not pay *tonki* or anything of the kind. You will present offerings to Imam Sahab and perform evening services too."

* The expression "proprietary tenures" has been used as opposed to "service tenures," and not as meaning the interest of talukdars or farmers. All tenures in this estate are, properly speaking, of raiyati character.

"To—Makund Panda.

It is hereby ordered that $3\frac{1}{2}$ *maus* of rice land and a plot of rent-free homestead are granted to you. You will cultivate or get cultivated by others all this land, and while engaged in the worship of Samadreshwar Mahadeb, you will enjoy this land so long as there are the sun and the moon. You will pay *tonki* at 12 annas a *mau* for the rice land and enjoy the homestead rent-free."

(4) *Specimen sanand for Khairat tenures.*

"To—Shib Charan Das.

You are allowed under *Baisab-jog* 5 *maus* 7 *goonths* of *Kothparia* land in mauza Siko and a plot of rent-free homestead in mauza Goonduchipara, measuring 8 *goonths*,—total 5 *maus* 15 *goonths*. You will cultivate or get cultivated the rice land and build your house on the homestead land and continue enjoying the same so long as there are the sun and the moon. You will pay $2\frac{1}{2}$ *kahuns* of *kauri* for each *mau* of the rice land, but no *magan* or subscription besides."

(5) *Specimen sanand for Datta-Anugraha tenures.*

"To—Ananda Mahapatra of Cherantpara.

As a matter of favour, you are allowed the plot of homestead occupied by Gouri Mahapatra of Cherantpara, with its fruit and fishery rights. You will have your house built on the same and enjoy it. You will pay a fixed *tonki* rent of four annas and nothing besides."

(6) *Specimen sanand for Khushab melak tenures.*

"To—Panchoo Jai Singh.

You are allowed, under *melak*, 2 *maus* of land out of *Kothparia* land in Muka Aiton, and a plot of unoccupied homestead in mauza Sisua is also granted to you rent-free. You will cultivate or cause to be cultivated the rice land and have your house built on the homestead and enjoy the same so long as there are the sun and the moon. For the *melak* rice land you will pay *tonki* at the rate of 2 *kahuns* of *kauri* per *mau*."

From the terms of the grants there is no doubt that the tenures, rent-free or at fixed quit-rents, created by them, were intended to be permanent, and as such they have been continued down to the present time.

For service-tenures, no *sanads* seem to have been granted. From the proceedings of the Settlement Officer, it is learned that the tenures of persons, whose services were no longer required, were resumed, and those who were rendering services at the time, had theirs continued. From the very nature of the grant of such tenures it follows, as a matter of course, that they were not intended to be permanent. If the services, for the payment of which grants were made, were no longer required, then in that case, the tenures were to be resumed and resumed lands settled with the holders thereof, they having preferential claim to settlement by reason of possession. But if services were still required and any particular servant dismissed, he would of course lose his land, which would go to the new servant appointed to do his work. These are, in my opinion, the legitimate incidents of service-tenures, and it appears that in the Government estates of Khurda *chakran jagirs* have been recorded as absolutely at the disposal of Government and the incumbent as liable, on dismissal, to lose their lands which can be granted to others appointed in their places.

Service jagirs in this estate, too, have always been, as appears from the settlement proceedings of 1865-71, at the free disposal of the proprietor, and have changed hands on the dismissal of the holders thereof. The view, that the proprietor is entitled to no more than the rent of the land, is not applicable to the service-tenures in this estate. It was open to the proprietor to pay his servants their wages in cash or land, and if he adopted the *jagir* system, he never intended that the servant should become regular tenants. Whether the *jagir* system is an economical or a good system, is unnecessary to discuss, but there is no law at present which can prevent landlords from continuing their old *jagir* system, and this system cannot be continued if the tenures were declared to be only resumable and not revocable. How would the proprietor pay, in *jagir*, his new servant appointed in the place of a dismissed servant if the *jagir* were resumed? If the old system is to be allowed, the service-tenures have to continue to be at the free disposal of the proprietor. So long, however, as the estate is under the Court of Wards, these tenure-holders might not be

PART II.
CHAP. II.

permitted to be disturbed in their possession, but the tenures should be clearly recorded as at the free disposal of the proprietor and the lands, included in them, as inalienable.

141. Service-tenures, as stated above, include lands either homestead or rice lands, or both, granted as either rent-free or *tonki* for the remuneration of services usually rendered, and are held by:—

- the servants of the estate;
the superior servants of the Raja;
the private servants of the Raja's household; and
(4) the servants of *thani* villages.

Servants of the estate.

142. The servants of the estate are:—

(1) Peaks.

(2) Ferry-men.

(3) Chaukidars.

Such of the above servants, whose services were no longer required, had their tenures resumed and settled with them at the settlement of 1865—71, and those who were rendering service at the time are even now holding their tenures, undisturbed, except some ferry-men whose tenures have been resumed, their ferries having been settled by public auction. These servants would not, properly speaking, come under tenure holders as defined in the Tenancy Act. They should be classed with the raiyats, and the cultivators under them, if any, regarded as under-raiyats.

143. The superior servants of the Raja are men of the same caste as the Raja, are generally regarded as his relations, and constitute, as it were, members of the Raj family. They are locally called "*shamantas*," and their services are required on the occasions of social and religious ceremonies. They were granted service-tenures known as "*Rajkumar jagirs*," and some of them other tenures as well, both rent-free and *tonki*. The *Rajkumar* tenures were all resumed at the settlement of 1865—71, as the *shamantas* were doing no service at the time. The late Raja was declared lunatic and he had no issue, and the then Settlement Officer probably thought it useless to continue the tenures the holders of which were not likely to have any duties to perform. It has, however, been recently urged by the mother and guardian of the present minor proprietor that something should be done to ameliorate their condition, and the matter is now under correspondence. There are at present 24 old families of the *shamantas* in the estate.

Private servants of the Raja's household.

144. The private servants of the Raja's household are:—

- (1) Brahman cooks,
(2) " waiter,
(3) Physicians,
(4) Bearers,
(5) Barbers,
(6) Carpenter,
(7) Blacksmith,

- (8) Potter,
(9) Gardener,
(10) Washermen,
(11) Drummer,
(12) Pipers,
(13) Sweeper, and
(14) Bird-catchers.

These servants were, at the settlement of 1865—71, rendering services to the late Raja who was in the estate at the time. That Raja is dead now, and the minor proprietor and family are residing in Cuttack, and it was at one time arranged to resume all the tenures at this settlement. The mother and guardian of the proprietor having, however, objected to this resumption, the question is at present under consideration, and in the meantime the tenures are left as they were before.

Servants of *thani* villages.

145. The servants of *thani* villages are:—

- (1) Barbers,
(2) Washermen,

- (3) Carpenters, and
(4) Blacksmiths.

These servants render occasional service and help to the villagers, and are allowed to hold certain quantity of homestead rent-free. This concession was probably made to induce them to reside in *thani* villages for the convenience of the residents thereof. The tenures, locally called *dash-kata*, have been left at this settlement as they were before. The excess areas, not covered by the

original grants, were resumed at the settlement of 1865—71, and some, for like reason, have been resumed at this settlement.

PART II
CHAP. II.

Rights of tenants as recorded in settlement of 1880-82.

146. In the completion report, written in English, for the settlement of 1880-82, the following is stated regarding the rights of tenants in this

estate:—

"These tenants," the report says, referring to *chandna*, *thani*, *pahi*, *tonki* and *bagyafti* tenants, "have no other rights to the lands leased by them than that of occupancy. They can hold the lands so long as they regularly pay their rents to the estate, and they cannot be demanded enhanced rates of rent till the expiration of the settlement period."

147. About the time of this settlement, Act X of 1859 had been in force

Rights acquired under Act X of 1859.

for over twenty years, and occupancy rights had, from the mere efflux of time, been legally acquired by such of the tenants as had held their lands for twelve years or more. It is probable that if the Raja had had his way, he would have prevented the accrual of occupancy rights, and that without difficulty, as the floods and cyclones to which the estate is exposed would have enabled him to dictate his own terms. It is idle, however, to discuss what would have been the case. It is sufficient that the tenants have been permitted to acquire the rights, which the law intended they should, and those who have not done so yet are in course of acquiring them.

148. The *thani* tenants in the estate have, it appears, always had the right of holding homestead land rent-free not exceeding one-sixteenth of the rice land cultivated by them in the village in which they reside. This right was admitted in the settlement of 1843-45, and has never since been questioned.

Rights of tenants derived from custom.

Some menials and artisans, performing common services of *thani* villages, are also, according to subsisting custom, entitled to hold certain quantity of homestead land under service-tenures, locally called *desh-hata*, as rent-free. The existing quantity of such land cannot be increased, nor are they in any way alienable, and the rights of the holders thereof are limited to their holding them rent-free, subject to the condition of their performing the usual village services.

There is no clear evidence to show how the holdings of deceased tenants used to be settled in the time of the Rajas. It is probable, the heirs of the deceased, according to the Hindu laws, used to succeed on payment of some fees to the proprietor, but the right of inheritance, it may be assumed, must have been conceded, and during the last thirty-two years, it has been enjoyed without any let or hindrance whatever. Excepting the right of *thani* tenants and of the village servants to hold some homestead land rent-free, and of inheritance, the tenants in Kanika have not, so far as I can make out, acquired any valuable rights from custom, enforceable in courts of law. They have, it is true, been treating their holdings as if they had absolute property in them. They have been selling, mortgaging, subletting and exchanging their holdings in whole and in parts, but they have been doing all this with the consent of the estate, either expressed or implied.

149. The question of the transferability of raiyati lands in this estate was

Transferability of raiyati lands.

raised in 1884, when an attempt was made to bring to sale some *thani* land, by the execution of a decree under Act X of 1859. On that occasion the following correspondence took place:—

No. 4, dated Cuttack Collectorate, the 14th January 1884.

From—K. G. GUPTA, Esq., Cwd. Deputy Collector in charge, Cuttack,
To—The Deputy Collector, Bhadrak.

WITH reference to your roobakari, dated the 21st ultim, in the execution suit No. 22, Bipra Mahapatra, plaintiff, v. Bhim Mahapatra, defendant, forwarded to the Manager of Kanika, and asking him to report what right the defendant has in his *thani* lands attached by the plaintiff decree-holder, and whether its sale is objectionable, I have the honour to observe that the remarks made by the Manager on the roobakari are wrong and in direct contravention of the orders of the Commissioner, and are opposed to the custom of the country. The defendant has only the right of occupancy in the holding and not the right of transfer, and its sale is therefore objectionable.

PART II.
CHAP. II.

2. I enclose copies of the Commissioner's letter No. 282W., dated 8th September 1882, and its enclosures, i.e., the Judge's letter, from which you will see that *thani* holdings are not saleable without the consent of the zamindars, and such sales have been set aside on the suit of zamindars.

I would, therefore, on behalf of the lunatic zamindar of the estate, object to the sale of the defendant's *thani* holdings. I may suggest that it is open to plaintiff to sue for ejectment under section 78 of Act X of 1859, and it is very probable that such a course would have the effect of compelling speedy payment.

No. 282W., dated Cuttack, the 8th September 1882.

From—A. SMITH, Esq., Commissioner, Orissa Division,
To—The Collector of Cuttack.

WITH reference to your No. 41 of the 22nd ultimo, it appears to be generally considered that *thani* holdings are not saleable without the consent of the zamindar, and that *pahi* holdings are *a fortiori* still less so.

2. I enclose a copy of a letter, No. 245 of the 17th August 1874, in which it is stated that such sales have been set aside on the suit of zamindars.

3. In 1874 the Government conceded to its *kalipottah* or *thani* raiyats in Khurda and Nayanand, the right to sell their holdings at their option, but reserved the right of re-entry on failure to pay the stipulated rent. It negatived a proposal to confer by legislation similar rights on similar raiyats elsewhere, because it was found that the raiyats did not possess the rights, and the Government would not be justified in creating them to the detriment of the proprietors.

4. It appears from your letter that such holdings have not heretofore been sold in execution of certificate.

5. It appears to me that, holding the estate as we do temporarily on behalf of a lunatic proprietor, we would not be justified in recognizing the saleable character of the holdings by bringing them to sale of our own action. The right to re-enter on a holding when a tenant leaves or fails to pay his rent and settle at the market rate of the day is one of value to the estate.

6. It is, therefore, in my opinion, not advisable to sell *pahi* or *thani* holdings in our execution proceedings.

No. 245, dated Cuttack, the 17th August 1874.

From—J. F. BROWN, Esq., Judge, of Cuttack,
To—The Commissioner of the Orissa Division.

WITH reference to your letter No. 744 of the 10th March last, I have the honour to state that I can only answer your questions in a general way. The obtaining of strictly accurate information would involve enquiries which I have neither leisure nor a sufficiently strong establishment to carry out.

2. In the first place, I have reason to believe that many *thani* tenures have been sold in execution without obtaining the consent of the zamindar. It has, however, been ruled, up to the High Court in regular suits brought by the zamindars, that both private sales and sales in execution of *thani* tenures are invalid.

3. In the second place, I do not think that mortgages of *thani* tenures have been frequent. I do not know whether the mortgagees have been successful in obtaining possession, but there can be very little doubt that in a regular suit, possession under such mortgages would be held invalid as against a non-consenting zamindar.

4. In the third place, *ijmah* shares of *thani* tenures have been awarded without the consent of the zamindar, but I know of no cases in which any actual division of land has been decreed, or in which it has been decided whether such divisions can or cannot be made without the consent of the zamindar.

5. In the fourth place, rights of occupancy have, as a rule, not been transferred by process of court, with or without the consent of the zamindars.

From the above copy of correspondence, it would appear that raiyati holdings in Kanika are not freely transferable, but that their sale is subject to the consent of the proprietor. This right of the proprietor has not, however, been systematically and carefully watched during the Court of Wards' management of the estate, and some transfers have been made without previous consent, but never against the expressed wish of the proprietor. It has always, however, been an understood thing and known to every one concerned that raiyati holdings in this estate are only transferable with the permission of the estate, and if some lands, from the *laches* of management, have been sold without such permission, the custom of free transferability cannot be said to have been created thereby.

150. The following statement gives an account of raiyati holdings, in whole or in parts, transferred by sale, from 1882-83 to 1889-90, with the permission of the Manager, whose procedure used to be to receive the petitions for transfers and file the same with the *jamebandi* (*shian*) of the village or villages in which the lands sold were situate:—

Year.		THANI.		PAHL.		REMARKS.
		Area of land sold.	Amount of sale money.	Area of land sold.	Amount of sale money.	
1		2		3		4
		M. D.	Rs. A.	M. D.	Rs. A.	
1882-83	... 1290 <i>Amli</i> ...	57-20	562 10	18-42	140 14	
1883-84	... 1291 „ ...	26-17	264 8	44-14	304 15	
1884-85	... 1292 „ ...	54-83	633 11	24-48	235 4	
1885-86	... 1293 „ ...	57-70	665 12	20-54	192 3	
1886-87	... 1294 „ ...	75-59	776 4	175-70	954 2	
1887-88	... 1295 „ ...	164-67	1,225 13	55-12	507 8	
1888-89	... 1296 „ ...	105-90	1,153 14	39-92	621 6	
1889-90	... 1297 „ ...	157-28	1,833 12	79-46	751 2	

The above statement does not show all the transfers that were made during the period, but only such as were sold with the permission of the Manager. The transfers during the years 1880-81 and 1881-82, when the settlement operations were in progress, were given effect to in the records then under preparation, and those from 1890-91 to 1893-94 have likewise been incorporated in the present records. Since the introduction of the present settlement, a new scheme of maintenance of records has been adopted, and the transfers recorded under it are shown below:—

Period.	THANI.			PAHL.			REMARKS.
	No.	Area.	Purchase money.	No.	Area.	Purchase money.	
1	2	3	4	5	6	7	8
1st April to 30th September 1894.	356	A. D. 457-98	Rs. A. P. 6,798 0 6	209	A. D. 396-51	Rs. A. P. 4,672 5 6	

The increase in the number of transfers since April is partly due to the fact that for a time, when the records were incomplete, their registration was stopped, and when it was commenced there were naturally more applications than would ordinarily have been made. This increase is also in part due to the better arrangements that have now been made for recording mutations and transfers.

PART II.
CHAP. II.

151. The following statement exhibits the price, per acre, for raiyati lands sold, and the proportion which it bears to rent:—

Year.	THANI.		PAHL.		REMARKS.
	Average price per acre.	Proportion of price to rent.	Average price per acre.	Proportion of price to rent.	
1	2	3	4	5	6
	Rs. A.		Rs. A.		
1882-83 ...	9 14	7 $\frac{2}{10}$ to 1	8 0	7 $\frac{1}{2}$ to 1	
1883-84 ...	10 2	8 $\frac{1}{10}$ to 1	8 4	7 $\frac{1}{2}$ to 1	
1884-85 ...	11 8	9 $\frac{1}{2}$ to 1	9 12	8 $\frac{1}{2}$ to 1	
1885-86 ...	11 7	9 $\frac{1}{2}$ to 1	9 10	8 $\frac{1}{2}$ to 1	
1886-87 ...	10 3	8 $\frac{1}{2}$ to 1	5 7	3 $\frac{1}{2}$ to 1	
1887-88 ...	7 7	6 to 1	9 4	8 $\frac{1}{2}$ to 1	
1888-89 ...	10 14	8 $\frac{7}{10}$ to 1	15 8	13 $\frac{1}{2}$ to 1	This was exceptional for the year in which some 6 acres were sold for Rs. 20 each.
1889-90 ...	11 11	9 $\frac{1}{2}$ to 1	9 8	8 $\frac{1}{2}$ to 1	
1st April to 30th September 1894.	14 14	12 to 1	11 13	10 $\frac{1}{2}$ to 1	

The prices fetched by the sale of raiyati holdings in this estate are necessarily affected by natural calamities and by the usual laws of supply and demand. They appear to have remained practically stationary during the currency of the last settlement, but have improved since the introduction of the present settlement, and this is somewhat inexplicable, considering that last year there were very poor crops and new rents were collected almost in lump, and so lands should have gone cheaper. It is probable that as now a regular written document is given when transfer is effected, and the purchaser gets thereby a valid title to the land he purchases, he is induced to pay higher than he used to do before. I do not, however, consider Rs. 12 or Rs. 15 as sufficient price for an acre of raiyati land which should fetch at least Rs. 30 or Rs. 40, and I feel sanguine the prices will considerably rise in a few years.

152. It is distinctly recorded in the settlement *roydd* of 1865—71 that the lands included in the rent-free or the *tonki* tenures are not alienable. With reference to the rent-free tenures, the following expressions occur in the *roydd*:—

“In this estate those who hold lands rent-free have not the right of alienating their holdings. The power of granting lands to anybody or of depriving anyone of his lands rests solely with the Raja

About *tonki* tenures it is stated—

“The holders of *tonki* tenures have not the right of alienating their holdings.”

In spite of this prohibition, the lands included in rent-free and *tonki* tenures have been alienated, and some of the latter have been done so with the consent of the Manager.

The following statement shows the particulars of *tonki* lands transferred with the permission of the Manager:—

PART II.
CHAP. II.

YEAR.	Area of land sold.	Amount of sale money.	Average price per acre.	Proportion of sale money to rent.	REMARKS.
1	2	3	4	5	6
		Rs. A.	Rs. A.		
1882-83 ...	2.64	40 0	15 2	25 to 1	
1884-85 ...	3.60	52 8	14 2	37 to 1	
1888-89 ...	1.80	12 0	6 9	9 to 1	
1889-90 ...	6.88	264 2	38 6	28 to 1	
April to September 1894 ...	4.63	226 12	48 11	113 to 1	

The alienation of *tonki* and rent-free lands is, as shown above, expressly disallowed, and when they are alienated, in spite of the prohibition, they are resumed, and the purchasers have to pay rents at rates applicable to resumed lands, and the average price fetched has, therefore, been about the same as for *thani* lands, except for such as have been sold this year. The rights of tenure-holders to sell their lands subject to the penalty of resumption having been recognized, their free exercise during the Court of Wards' management may be permitted, subject to the permission of the estate and the payment of fees as has been done in the case of raiyats. This concession would of course not apply to *debottar* and *pirottar* tenures, nor to service-tenures.

Rights of tenants at the present settlement.

153. The rights of the tenants at the present settlement are summed up thus:—

- (1) *Thani* or settled raiyats have, by custom, the right of holding, rent-free, homestead not exceeding one-sixteenth of the area of rice land hold by them in the villages in which they reside;
- (2) Some artizans and menials performing common services of villages are, according to custom, entitled to hold the existing quantity of *desh-hatu* homestead land free of rent;
- (3) *Thani* and such of the *pahi* raiyats, who have held their lands for 12 years or more, have acquired the rights of occupancy as defined in Act X of 1859 and the Tenancy Act of 1885;
- (4) The right of inheritance is freely allowed to all the tenants during the Court of Wards' management subject to the payment of prescribed transfer fees; and
- (5) Subject to the consent of the estate, all the tenants (excepting *debottar*, *pirottar* and service tenure-holders) are permitted, during the Court of Wards' management, to transfer by sale, gift or otherwise, their holdings, in whole or in parts, on payment of prescribed fees.

The sanctioned fees are two annas per acre or fraction of an acre, with a minimum of four annas and a maximum of 1 Re. for each transfer. The introduction of the words "during the Court of Wards' management" in the last two clauses is found necessary in order that our present scale of fees or our rules may not bind the Raja to whom it might be open to charge such fees as the Tenancy Act would allow him to do, or to withhold his sanction to the splitting of holdings. The rights of transfer have not yet been legally acquired, though their exercise has been permitted, and cannot well be prevented. The rights of inheritance are assumed to have been acquired, but in the matter of charging fees there is room for change.

154. The right of mortgaging holdings has not, I understand, been conceded in the Government estates of Khurda, but the raiyats of this estate have hitherto been freely mortgaging their holdings, in whole as well as in parts, and it is not possible to stop this without causing considerable hardship and depreciating raiyati lands. Mortgages are temporary transfers, and these should, I think, be neither recognized nor interfered with. When they are foreclosed, it would be open to the proprietor, under the general power of withholding his consent to permanent transfers, to exercise his discretion to admit the mortgagees as raiyats or not.

155. The practice of splitting holdings has since some time been permitted, and it cannot now be altogether stopped, and I do not see any valid objection to it. It is generally assumed that the subdivision of holdings leads to the reduction of their average size below what can support a family. This assumption is, to a great extent, gratuitous and opposed to common sense. No family can permanently starve, and consequently it cannot depend on a holding which is insufficient for its support. When a part of a holding is sold, it either goes to a new tenant or to an old tenant. In the former case, it goes to one who has hitherto been supported by some means other than cultivation. If he goes in for cultivation as a sole means of support, he would naturally buy up as much land, though from different persons, as would enable him to live thereby. In the latter case, the old tenant simply adds to his old holding. As a rule, the splitting of holdings does not lead to the reduction of their size, but what does the real mischief is over-population, against which there are no prudential checks. If a man having a holding just sufficient for one family gets four sons and in time four families, his holding is split up with a vengeance. The average size of holding held by each *thani* raiyat was $3\frac{1}{2}$ acres in the settlement of 1865—71, $3\frac{1}{2}$ acres in that of 1880—82, and now in the present settlement is 4.13 acres, showing that the free splitting of holdings, which has been permitted during the last 30 years, has not had the effect of reducing their average size.

Then it is sometimes held as a reproach to Indian tenantry that the raiyats have their holdings consisting of scattered plots. They have, however, very good reason for doing so. They require lands in different situations in order that they may have some for raising seedlings, some for growing early crops, and some for late crops. It would certainly not suit them and their mode of cultivation to have compact little farms. If a raiyat finds that he has more of one kind of land than he needs, he parts with it and gets a new bit elsewhere. The splitting of holdings does not injure the interest of the proprietor, and it is of real benefit to the tenants, and the continuance of the existing practice subject, of course, to the proprietor's consent, should be permitted. This would no doubt make the work of maintenance of records difficult, but the difficulty is not insurmountable.

156. Under Act X of 1859 no clear distinction was made between raiyats and under-raiyats. According to section 2 of that Act every raiyat was entitled to receive from the persons to whom the rent of the land held or cultivated by him was payable, a *patta* containing certain particulars, and the term "raiayat" apparently included "under-raiyat." So far as this estate is concerned, under-tenants, whether under tenure-holders, such as holders of *Brahmottar* and other similar tenures, or under recorded raiyats of the estate, were classed together and treated as under-raiyats without any rights and merely as tenants-at-will. Since the introduction of the Tenancy Act, the under-tenants under tenure-holders other than service tenure-holders are raiyats proper like those directly under the proprietor, and those under service tenure-holders and raiyats are under-raiyats with rights defined in Chapter VII of the Tenancy Act. The under-tenants, whether under tenure-holders or raiyats, have not yet understood or asserted their rights under the Tenancy Act, and some time will elapse before they do so. The settlement of this estate having been amicable and not made under any law, the rents for the raiyats of the tenure-holders could not be recorded. Neither the raiyats nor the tenure-holders wanted or permitted the Settlement Officer to have anything to do with the question of rents between them. It would, however, now be open to these raiyats to have their rents fixed by the Courts under the Tenancy Act, which has been partially and will, at no distant date, be fully introduced into Orissa.

CHAPTER III.

SYSTEM OF COLLECTION AND COLLECTING AGENCY.

157. Nothing definite is known regarding the collection system of the

System of collection and the
collecting agency under the
Rajas.

estate till 1843. It was under direct Government management in 1806 and under quasi-Government management in 1830-34, but there are no papers of those periods to show what the system then was.

From some old people of the estate, however, who are in full possession of their faculties and have full recollection of Raja Benayak Bhanj's time, it is gathered that under the Rajas there were two head *amlas*, *Dewan* and *Bebarta*, and the latter used to be ordinarily in charge of collection. The two principal *Elakahs*, *Chhamuka* and *Panchmuka*, were under the direct management of the *Bebarta*, under whom were two *chaudhris* in charge of the above two *Elakahs*, and under the *chaudhris* there were *bara-sanos*, each in charge of a village or cluster of villages. The *chaudhris* were full *Elakah* officers charged with various duties, and were assisted by accountants called *kanungos*. *Bara-sanos* were petty local officers and directly subordinate to the *chaudhris*. The *Elakahs* of *Kerara* and *Kaladwip*, which were subsequently added to the *killah*, were managed somewhat differently. In those *Elakahs* there were *bebartas*, *bissois* and *sarbarahkars* in the place of *Elakah chaudhris*, *kanungos* and *bara-sanos*. The *Elakah bebartas* were subordinate to the *Sadar bebarata* just as the *chaudhris* of the other two *Elakahs* were, and the *sarbarahkars* were, like *bara-sanos*, each in charge of a village or cluster of villages. The *bissois* were, however, an additional class in the two southern *Elakahs*, and constituted an additional link in the chain of local subordination, the necessity for which probably arose by reason of their being at a distance from the seat of Government and added to the *killah* at a later date.

Collections used to be made by the local officers, the *bara-sanos* or the *sarbarahkars*, under the supervision of the *chaudhris* or the *Elakah bebartas*, who had to render account to the *Sadar bebarata*. All were mere servants and removable at pleasure. The *bara-sanos* and the *sarbarahkars* were, so far as I can find, mere rent collectors without any hereditary or other rights, and often, sometimes in the middle of collection season, used to be dismissed, removed or displaced.

158. In 1843 the estate came under Government management, and continued under it for six years. During this period a

Mustagiri settlement introduced
under Government management
(1843-49).

settlement was made which took two years to complete, and was concluded for the remaining four

years with a body of middlemen called *mustagirs*, at an annual net rental of Rs. 68,421-2-9 rising to Rs. 68,952-9-11 in the four years of the currency of the settlement. These *mustagirs* were drawn from the old *bara-sanos*, *bissois*, *Elakah bebartas* and *sarbarahkars*, and were, for the first time, treated as farmers and not as servants, and the amount for which they engaged was called *sadar-jama* as distinguished from the *mufassal-jama* payable by the tenants. The *sadar-jama* was the entire rental fixed at the settlement less by 15 per cent. of the amount allowed to the *mustagirs* as commission. The system of collection and the agency were thus both completely altered: the system which was *khas*, became farming; the agency which was that of servants, became that of recognized middlemen, and cash payments were substituted for the old system of land grants, and all this change was made just for four years!

The settlement, though making wholesale change in the system, resulted in apparently substantial increase of rental. The rental, according to the Raja's papers, is shown to have been Rs. 49,000 only, against Rs. 68,000 of the settlement.

The increase obtained was principally by the resumption of service-tenures and the settlement of *khamar* lands. Some 2,000 acres of *bara-sano* or *mustagiri jagirs* were resumed and settled for about Rs. 2,500, but in lieu of this trifling amount of rent, the *mustagirs* were allowed, as commission, about Rs. 12,000 in cash. The settlement of some 3,000 acres of *khamar* lands yielded a rent of about Rs. 4,000, but the value of the Raja's share of the produce was three times more. This settlement thus chiefly benefited the *mustagirs*, the very men to bring whom under control and subjection the late Raja Benayak Bhanj had made over his estate to Government for temporary management.

PART II.
CHAP. III.

159. On the restoration of the estate to Raja Tribikram Bhanj and the expiration of the term of the four-year Government settlement, the old system of collection by servants was re-introduced, the resumed *jagirs* and *khamars* were restored, and the cash commission to mustagirs was discontinued.

The mustagirs, however, were sufficiently demoralized by having got the better of Raja Benayak Bhanj and by the four years' mustagirship when they tasted power, and both Raja Tribikram Bhanj and his successor Raja Padmanabh Bhanj found it difficult to manage them.

160. In 1862, when the charge of the estate was assumed by Government, the mustagiri system, which was introduced in 1845-49, was re-introduced, and, pending the completion of a settlement which was commenced at once but not finished till 1870, summary settlements from time to time were made with the mustagirs, who were, in the absence of detailed measurement and settlement of rents, left to make their own arrangements with the tenants.

161. In 1870, however, a regular settlement was made for two years (1871 and 1872) with the mustagirs, by whom kabuliyats in the following form were executed:—

- I.—That I shall lawfully collect rents from all classes of tenants and pay the estate dues according to the following instalments.
- II.—That if I fail to pay the estate dues for any of the instalments fixed or all of them, the Court of Wards will have the power to cancel my *jara* and settle the same with anybody else, and realize the estate dues according to law, and to this I myself or my heirs will raise no objection and any objection, so raised will be disallowed.
- III.—That I shall raise no objection to the payment of estate dues on account of flood, drought or any other calamity, and any such objection raised by me will not be valid.
- IV.—That I shall not without the sanction of the Court of Wards make anybody a sharer in the said *jara*.
- V.—That I shall not cut down any of the trees in the village.
- VI.—That if, for any neglect on my part, any loss is caused to the estate, I shall be held responsible for the same.
- VII.—That if I die within the term of this *jara*, the Court of Wards will have the power to cancel and settle the same with anybody else or to settle it with my son or other heirs, if willing.
- VIII.—That I shall grant receipts to all classes of tenants immediately after I make collections from them.
- IX.—That I shall always keep ready accounts of my *mustagiri*.
- X.—That I shall not oppress the raiyats in any way.
- XI.—That if I act contrary to any of the conditions mentioned above, my *jara* will be cancelled on the fact coming to the notice of the Court of Wards.
- XII.—The villages having recently been settled, the results of settlement have been reported for sanction, and if under orders of any higher authorities any change is made in *lakhraj tonki* and *jagir* lands resulting in increase or decrease of rental, I shall, in the event of decrease, make allowance for the same in the accounts of the raiyats concerned, the amount being set off against my account with the estate, and in the event of increase, realize the same from the raiyats concerned and pay the amount to the estate in addition to the *jama* fixed at this *jara*.
- XIII.—That excepting the above I shall raise no objection to anything else.

This settlement was renewed in 1873 for two years (1873 and 1874) and fresh kabuliyats were taken from the mustagirs. The form of the kabuliyat adopted in 1870 was but slightly altered: its first 11 clauses were maintained intact, and in lieu of the 12th, the following four additional clauses were added, and the 16th clause was a *verbatim* reproduction of the 13th clause of the preceding settlement kabuliyat:—

- XII.—That I shall annually realize rents from the raiyats during the term of this *jara*, at the end of which I shall submit accounts of all the amounts collected by me.

XIII.—That in case I fail to pay the estate dues, my *sardari* and *raiya* lands which I enjoy will be taken away from me and let to another. PART II.
CHAP. III.

XIV.—That I shall render every assistance in keeping the embankments of the villages in good repair.

XV.—That I shall realize rents for pastures and fisheries which may be fixed hereafter in addition to those already settled.

The third mustagiri settlement was made in 1875 and was for five years (1875 to 1879). At this settlement the form of the *kabuliyat* adopted at the preceding settlement of 1873-74 was maintained, excepting that the 15th clause was omitted and the wording of clauses Nos. 2 and 7 was slightly changed.

162. The fourth and the last mustagiri settlement was made in 1882 for ten years, with retrospective effect from 1880. At this settlement considerable changes were made in the *kabuliyat* form, and a translation of it is reproduced from my first settlement proposals, pages 22 and 23 (printed copy).

Last mustagiri settlement.

- I.—That I shall lawfully collect rents from different classes of tenants according to the terms laid down in this *kabuliyat*, and remit to the estate the rent due from me by the instalments detailed at the bottom of this *kabuliyat*.
- II.—That I shall neither sell, cut down, nor allow any one to cut down, any tree of the *mauza* or *mauzas*.
- III.—That I shall raise no objection to payment of rent due to the Court of Wards if there be any loss of crops on account of flood, drought or any other calamity, and the objection, if any, so raised will not be heard.
- IV.—That I shall not alter without Collector's sanction the *jamabandi* approved of by the Collector and specified in the Settlement Office *roobakari* dated , nor shall I enhance the rents due from the tenants.
- V.—That I shall enjoy the profits derived from waste lands which will be brought under cultivation by me, so long as I do not violate the terms of this *kabuliyat*.
- VI.—That if I die within the term of this *kabuliyat*, the Court of Wards will have the power to employ any other person as *mustagiri* in my place, and any objections raised by my heirs and successors will not be valid and will not be heard.
- VII.—That I shall keep account of the rent that will be collected by me and that I shall submit at the end of every year the measurement papers of the waste lands that will be brought under cultivation, *jamawasilbaki* papers of all the waste and cultivated lands of the whole *mauza*, and other collection papers.
- VIII.—That I shall not oppress the *raiya*s in any way, and that I shall not take anything from them excepting the *jama* fixed at the settlement.
- IX.—That I shall do *patwari*'s work in my *mauza*, and shall submit without any objection any papers which the Court of Wards may require from me.
- X.—That if I sell or sublet my *mustagiri* right to any one, or make any other person a sharer in the *mustagiri* or dispose of it in any other way, my so doing will not be valid and will be disallowed.
- XI.—That I shall collect along with rent the road cess and public works cess, and any other lawful tax, and grant the *raiya*s printed receipts, and shall submit without any objection the counterfoils of those receipts at any time called for by the Collector.
- XII.—That I shall not cut down any jungle unless required for cultivation, and if jungles are cleared for cultivation, I myself, or the tenants authorized to do so, will be able to sell the trees cut down with a view to recoup the expenditure incurred in clearing the jungle.
- XIII.—That I shall give assistance in repairing the embankments of the *mauza* in my charge.

XIV.—That I shall be held responsible for the outstanding balance of the year 18 , i.e., the last year of the term of this mustagiri; and

XV.—That if I violate any of the above conditions, and do not carry them out, the Collector will have the power to cancel this kabuliyat under his own order without having recourse to the Civil Court, and the kabuliyat may be cancelled even if the violation or neglect of any of the above conditions be found in the middle of any year, and the outstanding balance which may be due from me at the time of cancelling the lease, and the loss, if any, incurred by the Court of Wards on account of my violating any one of the above conditions or neglecting to carry them out, will be realized by the Collector from me, or on my death from my heirs and successors by the sale of my movable or immovable property, whether held in my name or in the name of my heirs or successors under the law in force or which may hereafter be in force, and to this proceeding any objection taken by me or by my heirs and successors will not be valid.

Instalments.

1. January	... 8 annas.	4. April	... 1 anna.
2. February	... 8 "	5. May	... 1 "
3. March	... 2 "	6. June	... 1 "

163. The last settlement expired in September 1890, and since then no kabuliyats have been taken from the mustagirs, who have, however, continued doing collection as during the currency of the settlement, the term of which was, under Board's orders, extended up to 30th September 1893. Some sixty mustagirs, holding some 105 villages, have died since four or five years, and their places have not been regularly filled up, but their relations or other persons temporarily appointed have collected rents in the usual course.

In the present year in which new settlement rents have come into force, collections have been practically *khas*, the mustagirs doing nothing more than writing out cheque receipts. The adoption of this especial mode was rendered necessary by the attitude of the people after the work of settlement was finished. The Collector was here at the time, and his remarks recorded in his inspection notes, dated the 30th November 1893, are quoted:—

"11. From what I have learned since I came to Kanika I fear that, as has been the case at every resettlement here so far, e.g., 1872-73, there will be an attempt at a combination not to pay rents at new settlement rates. The raiyats of Chhamuka excepted, the tenants are beginning to grumble. Though, as above noted, nearly all signed the khatians, and 95 per cent. of those did so before the Manager, and though a ticket showing the raiyat's name, area of his holding, and rent as per resettlement was given to each tenant when he signed the khatian, ignorance of the result of resettlement cannot now after all these months be pleaded, yet many raiyats have been declaring that they would not pay the new rents. As a rule, as the examination I made at the detailed terij shows, individual increase has been very slight, and has been due to excess area discovered in most cases. Mustagirs have been an exception. They have very generally, probably, just because they were mustagirs, been holding good lands at bad land rates, i.e., they have been paying much less than they should. This has been remedied, and there seems too much reason to believe that in consequence they—at least 10-12 of them—have been inciting the raiyats, as have the ex-leasees of the jungle mahals who are also dissatisfied. A large number of raiyats having assembled, I took the opportunity of warning all that if rents were withheld and the mustagirs consequently failed to collect, *khas* collection would probably have to be resorted to as in Kujang, when there would be an end of the mustagir class.

"It would in some way have been better had this resettlement been carried on under the Bengal Tenancy Act on the introduction of that Act. It is unfortunate that the agreements of the mustagirs expired three years back, and that they have been collecting since on '*hukumnamas*' issued yearly, so that we have no definite hold upon them. In the case of new mustagirs it has been usual to take security in a way by making all whose rent was Rs. 500 or over, pay up half before granting '*hukumnama*', and those whose rent was under Rs. 500, pay up the whole when '*hukumnamas*' issue for the new collections, and these should be issued early to permit of other arrangements in the event of a mustagir proving refractory. The Manager should promptly have all who decline to accept '*hukumnamas*' set aside at once and for good. If he can now obtain sufficient evidence of any mustagir instigating raiyats to combine or withhold the new rents, he should at once report with a view to having him dismissed."

The mustagirs were found to be unreliable and they could not well be trusted to collect new rents, especially as they had executed no kabuliyats. They had formed a combination as they used to do in Raja's time and as they had done during the settlements of 1865—71 and 1880—82, and I felt that I could have no confidence in them. What they were aiming at was to accept the "*hukunnamas*" and make no collection, and after wasting time, to report their inability to collect owing to the refusal of the raiyats who were, of course, to be represented as quite reculant. I saw through their dodge and decided upon a sort of "*khas*" collection system for this year. The existing system could not, however, altogether be changed without proper sanction, for the obtaining of which there was no time, and it had therefore to be maintained, at least so far as the agency was concerned, but in other respects, collections have been made practically "*khas*." Raiyats were called to appointed centres and rents collected by the mustagirs, either in my presence or in that of the Head Clerk, temporarily appointed as an Assistant Manager, and collection money paid in every evening. In about two months' time nearly all the rents were thus collected and all trace of the combination wiped off.

164. The *bara-sanos*, the *bedariyas*, the *bissois* and the *sarburahkars* in the time of the Rajas were mere local officers, and not, Rights of the collecting agency. so far as I can find out, middlemen, which they have been made during the Court of Wards' management of the estate; and as local officers they were mere servants without any rights, and even as mustagirs since they have not been allowed to acquire any valid rights. In all the four kabuliyats executed by them since 1871 it has been distinctly provided that on failure of punctual payment of rents they are liable to dismissal, and they have been so dismissed from time to time. The acquisition of any hereditary rights have been expressly prevented by suitable clauses in all the kabuliyats (*vide* clause 7 of the first three kabuliyats and clause 6 of the last kabuliyat). The exercise of any right of sub-letting has also been expressly prohibited. They were, however, for the first time granted a valuable concession in clause V of the last kabuliyat, by which they were allowed to appropriate the profits of waste lands brought under cultivation by them during the currency of the settlement. This concession was, however, more nominal than real, as it was treated as a dead letter by the Settlement Officer himself as will be shown in a subsequent chapter.

165. The Settlement Officer, late Babu Sapnoswar Dás, spent several years in close contact with the people, and the Characteristics of the existing class of mustagirs. remarks recorded by him in his settlement *roydád* of 1865—71 concerning the mustagirs are as follows:—

"In this estate mustagirs are appointed for purposes of collection. These mustagirs know nothing else beyond harassing the raiyats and trying to misappropriate the rents collected by them. They are unfaithful and untrue. Whenever any pressure is put upon them in consequence of their not paying to the estate the rents collected by them, they combine and form '*melis*.' In consequence of such malpractices on the part of the mustagirs the former Rajas of the estate, being unable to realize their dues, were frequently driven to the necessity of having their estate placed under Government management. This fact is evident from the old records of the estate. When the present Raja, Padmanabh Bhanj Bahadur, made over the estate to Government, the rents due from the mustagirs could never be realized. The mustagirs are not men of substance, and the securities furnished by them being invalid, not even one-sixteenth of the amount misappropriated by them is realized. This system, if continued for ever, will be injurious to the interest of the estate."

The mustagirs, who were local officers in Raja's time, had, by their "*melis*," given great deal of trouble to the former Rajas, and had proved themselves quite intractable. It was their stubbornness and obstinacy which drove Raja Benayak Bhanj in 1843 to make over his estate to Government for management. They have not as yet given up their old tactics, for they got up a "*meli*" this year too, and the affair has been noticed in the Collector's inspection notes, extracts from which bearing on this point have been quoted in paragraph 163 above. This year's "*meli*" was a big affair, almost all the people joining in it, some actively, but great many passively. There were, however, no real grievances, but only a mass of misrepresentations supporting a fictitious agitation which of course was bound to end in smoke, and so it ended. The ignorant raiyats are very docile but liable to be easily led, and it is always easy for the wicked mustagirs to get up a "*meli*" which usually benefits a few

PART II. leaders who are allowed to take charge of the common funds. As natural leaders
 PART III. of tenants, the mustagirs are mischievous, and as collectors of rent from tenants,
 oppressive and unscrupulous; but from an ignorant class of men we could reasonably expect no better behaviour.

166. During the Raja's time the local officers were granted service-tenures, and they had their perquisites and fees leviable from tenants besides. For four years (1845 to 1849) their tenures were resumed and, probably, their perquisites and fees also stopped, so far as this could be done at that age, and in lieu of all they were allowed 15 per cent. commission in cash. During 1849 to 1862 the Raja's system was again in force, and since 1862 they have up to date been allowed 10 per cent. commission, which they were permitted to deduct from the amounts collected by them. In 1894 they have, however, been required to pay in the whole amount of their collections which have been made, as already noted, under direct supervision, and their commission at 10 per cent. has been drawn and subsequently paid.

167. The villages of the deceased or the dismissed mustagirs and those relinquished by them used formerly to be kept under "khas" management until new mustagirs were appointed. The rents of such villages before 1888 used to be collected by quasi-mustagirs locally called *karyis*, the difference between whom and the real mustagirs consisted in the former being mere rent collectors, while the latter were some sort of farmers. The *karyis* were allowed commission at 10 per cent. just as mustagirs, but the former were not permitted to deduct their commission from out of the collection money in their hands as the latter were. The employment of *karyis* has, however, been discontinued since 1888, and the rents of "khas" villages have since been collected by the paid muharrirs of the establishment. The following statement shows the number of villages held *khas* during the currency of the last settlement and the number of tenants in them:—

Year.	No. of villages "khas."	No. of tenants.	REMARKS.
1	2	3	4
1879-80 ...	1	29	
1880-81 ...	1	29	
1881-82 ...	3	40	
1882-83 ...	6	380	
1883-84 ...	13	518	
1884-85 ...	9	898	
1885-86 ...	9	898	
1886-87 ...	13	963	
1887-88 ...	10	455	
1888-89 ...	7	119	
1889-90 ...	11	223	
1890-91 ...	10	250	
1891-92 ...	9	252	
1892-93 ...	15	647	

CHAPTER IV.

PART II.
CHAP. IV.

REVISIONS AND ALTERATIONS MADE IN THE RENT DEMAND OF THE LAST SETTLEMENT AND THE CAUSES OF SUCH MODIFICATIONS.

168. The last settlement, which was concluded in 1882 (1289 *Amk*) was given retrospective effect from 1880 (1287 *Amk*),

Term of last settlement.

and its period was, under Board's orders, in their No. 1266A., dated 24th October 1892, extended to 1898 (1300 *Amk*), and it thus remained in force for 14 years. Following the last settlement precedent, the present settlement could likewise have been given retrospective effect from 1890 (1297 *Amk*), but this was disallowed, and rightly disallowed, and the old *jamas* were collected for four years after the expiration of the term of 10 years originally sanctioned for the last settlement.

169. After the conclusion of the last settlement in 1882, resulting in a

total rental (*mufussal jama*) of Rs. 1,12,905 for 104,102 *mans* of land, the rents of two villages were revised, of one under the orders of the Board, and of the other under those of the Collector. The rents of village Nalgunda, Muka Palaspur, Elakah Panchmuka, settled at the settlement, were Rs. 651-14-8, and were, after revision, as directed by the Board, reduced by Rs. 119-9-3½ to Rs. 532-5-4½. This village, it was stated, contained a lot of concealed land and was carefully measured in 1880-82, and the entire cultivated area so discovered was assessed at the high rates prevalent in the neighbourhood, and the assessment having thus been suddenly raised, had to be softened down during its revision.

In village Baghuá, zilla Guldia, Elakah Kerara, some culturable waste lands were measured as under cultivation and assessed at full rates, and after the completion of settlement, a revision was made, which resulted in the reduction of rent by Rs. 57-3-4, the original rental being Rs. 244-1-3 and the revised one Rs. 186-13-11.

The rent demand had also to be reduced on account of abatements granted for lands under settlement, having been relinquished, abandoned, or eroded. In the following statement are shown all the abatements and reductions made in the rent-roll during the currency of the last settlement:—

YEAR.	REDUCTION.		REMARKS.
	Area.	Rental.	
1	4	3	4
	<i>Mans</i>	<i>Rs.</i>	
1881-82 ...	...	58	On account of revision of rents of village Bhaguá referred to above.
1883-84 ...	28	62	Due to surrender of a few acres to the Aul estate and to erosion of some riverside lands.
1884-85 ...	151	117	Due to erosion and partly to abandonment of lands.
1885-86 ...	323	472	Due partly to revision of rents of Nalgunda village referred to above and partly to erosion.
1886-87 ...	142	182	Due partly to erosion and partly to relinquishment of lands.
1887-88 ...	89	74	Due to erosion.
1888-89 ...	29	45	Ditto.
1889-90 ...	4	18	Due partly to erosion and partly to correction of a mistake in settlement papers.
1890-91 ...	72	79	Due to erosion.
1891-92 ...	77	128	Ditto.
Total ..	915	1,235	

PART II.
CHAP. IV.

170. The following statement shows the additions to the rent demand of the estate made during the currency of the last settlement:—

YEAR.	ADDITION.		REMARKS.
	Area.	Rental.	
1	2	3	4
1882-83 ...	<i>Māns.</i> 237	<i>Ra.</i> 43	Due to settlement of reclaimed jungle and waste lands.
1883-84 ...	806	253	Due to settlement of new lands brought under cultivation in a few villages and of reclaimed jungle lands.
1884-85 ...	961	498	Due to settlement of new lands both in old and new villages.
1885-86	1,518	613	Due to settlement of fresh lands in old and new villages.
1886-87 ...	586	335	Due to settlement of some reclaimed jungle land and of some waste land in settled villages.
1889-90 ...	155	67	Due to settlement of <i>nālak</i> land of settled villages and also of reclaimed jungle land with tenure-holders.
1892-93 ...	1,218	864	Due to settlement of land with tenure-holders.
Total ...	5,481	2,673	

From the statement above it will be seen that after the completion of the settlement in 1882, the work of settlement did not cease. Extensions of cultivation not only in jungle blocks, wherein tenures were created, but also in villages already under settlement, continued to be measured and settled. The inclusion in the rent-roll of the rents of waste lands in the villages settled with the mustagirs in the settlement of 1880-82, was apparently in contravention of the 5th clause of their *kabuliyat*, which was as follows:—

“That I shall enjoy the profits of waste lands which will be brought under cultivation by me so long as I do not violate the terms of this *kabuliyat*.”

This concession was one of the principal changes introduced in the last settlement at the recommendation of Mr. Nolan, the then Collector, but it was apparently treated as a dead letter, or was probably never understood as a real concession to the mustagirs. The proceeding of the then Manager in this respect was, however, in accord with the previous practice, and the continuance of it, under the scheme of an improved system of maintenance of records, is all the more necessary and should be allowed.

171. Before the cyclone of 1885, some jungle lands were cleared, some by raiyats, but chiefly by the lessees of large jungle blocks. Those cultivated by the former were settled with them as raiyati lands, and those cleared by the lessees constituted, properly speaking, tenures; the lessees being speculators, not actual cultivators. There were, as stated in paragraph 81 above, five tenures created by grant of jungle reclamation leases, and they are held, one by a Kanika mustagir and four by two speculators resident of district Midnapore, at present residing, one at Chandbally and the other in the estate. A brief account is given showing how, when and on what terms they came to be created.

In 1879 a special lease, with the Board's permission, was granted to one Mr. Winterscale for a block of jungle estimated to contain 7,200 local *bighas* or *māns*. This lease was for 16 years, from 1879-80 to 1894-95, and the conditions inserted in it were:—

- (1) That the areas reclaimed were to be held rent-free for the first two years, and thereafter to be subject to assessment at 3 annas per *mān* from 3rd to 9th year, and at five annas per *mān* from 9th to 16th year, and after expiry of its term, at rates prevalent in the neighbourhood;

(2) That out of 7,200 *mas*, 1,000 were to be reclaimed by the end of the 3rd year of the tenancy, another 1,000 by that of the 5th year, and 1,700 *mas* more by that of the 9th year, the balance, viz. 3,500, being presumed to be unculturable, and failure in reclamation at the above rate was to carry the penalty of forfeiture of the lease; and

(3) That the quantity of land under cultivation was to be declared before 31st December each year for adjustment of rent demand.

Mr. Winterscale remained in possession for about five years, i.e., up to 1884-85, and during this period, spent a lot of money on reclamation, but brought under cultivation only 229m. 21g. 4b. in two villages, which he named *Chapmanpur* and *Rabipur*, and these were settled with him for Rs. 43-1-9, as detailed below:—

	M.	G.	B.		Ra.	A.	P.
Chapmanpur	187	14	0	at 3 annas	...	35	2 9
Rabipur	42	7	4	do.	...	7	15 0
Total	...	229	21	4	...	43	1 9

In 1885, Mr. Winterscale left India, and, with the permission of the Collector, sold his rights under the lease to one Babu Srirup Chandra Sarkar of Midnapore, who has since been in possession. The 2nd and 3rd conditions of the lease not having been fulfilled by the Babu, it was, with the Collector's sanction, cancelled in 1889, and the land then under cultivation settled with him at 5 annas a *man*. At the present settlement the Babu has been allowed, as a tenure-holder, settlement, at 10 annas an acre, of the lands held by him in the two villages, the raiyats of which, however, pay him rent at Re. 1-11 per acre. The rent of the tenure-holder could not, however, be further raised, as enhancements had to be limited to 100 per cent., and as the sanctioned average rate for raiyati lands in the neighbourhood is only 10 annas an acre.

A village in the south, *Sanakaji*, was out of cultivation from 1856, and in the settlement of 1880-82 it was settled as a waste village with Babu Srirup Chandra Sarkar, who also holds the first-named tenure. The cultivated portion of it was settled at annas 14-7 and culturable waste lands at annas 2-1 per *man*. At the present settlement only cultivated area has been settled at 14 annas per acre. The raiyats of the village, who are all *pahi*, pay to the tenure-holder half share of produce, the value of which at the lowest estimate would be Rs. 6 per acre.

In 1884, permission was given by the then Manager to three persons for clearing and cultivating jungle lands in Muka Dangmal, and three villages were formed, viz. :—

- (1) Saradaprasad, by Babu Srirup Chandra Sarkar;
- (2) Kamalpur, by Babu Trailokya Nath Sarkar of Midnapore; and
- (3) Pinchhapatia, by Harekrishna Das of Cuttack, who transferred in 1886 his interest in the village to Rattan Maharathi, a mustagir of the estate.

The cultivated lands in these villages have been settled as tenures with the three persons named above, at 10 annas an acre, which is the average rate sanctioned for reclaimed jungle villages.

The total area held by the above-mentioned tenure-holders amounts to 1,044.17 acres, the greater part of which is cultivated by the raiyats of Kanika and neighbourhood. The rents for them should have been recorded during this settlement, but, as elsewhere stated, under the amicable settlement which I have made, I could only record rents payable by raiyats and tenure-holders to the ward and not the rents payable by the raiyats under the tenure-holders, neither of whom wanted or allowed me to have anything to do with their rents, and there was no law to help me. All that I could do was to record the names of the raiyats, the area of land held by them, and the amount of rent the payment of which they admitted. The raiyats did not, as a rule, readily come forward to attest the entries in the records regarding them, being probably afraid of the tenure-holders.

172. The alterations in the rent demand, on account of the abatements and the additions shown in the above statements, give no idea of the actual extent to which the rent-roll was affected. The additions and abatements are trifling in comparison with

PART II. the amounts which were remitted during the currency of the last
CHAP. IV. and which are shown in the following statement:-

YEAR.	DEMAND.		REMISSION.			Percent- age of remission on total rent de- mand.	REMARKS.
	Rent.	Cesses.	Rent.	Cesses.	Total.		
1	2	3	4	5	6	7	8
	Rs.	Rs.	Rs.	Rs.	Rs.		
1881-82	1,06,741	5,233	3,128	...	3,128	2.8	
1882-83	1,06,848	4,926	26,779	729	27,508	24.6	
1883-84	1,07,173	4,807	4,389	228	4,617	4.1	
1884-85	1,07,983	4,821	2,139	61	2,200	2.1	
1885-86	1,07,741	4,724	1,223	43	1,266	1.1	
1886-87	1,08,341	4,746	32,676	1,371	33,846	30.9	
1887-88	1,08,386	4,742	11,376	456	11,831	10.4	
1888-89	1,08,228	4,734	22,713	913	23,626	20.9	
1889-90	1,08,108	4,728	44,838	1,708	46,546	41.2	
1890-91	1,07,760	4,710	2,028	170	2,198	2.3	
1891-92	1,10,669	4,783	3,258	119	3,377	2.9	
1892-93	1,12,311	4,781	1,264	46	1,309	1.1	
Total	12,90,173	57,734	1,66,610	5,736	1,61,346	...	
Average for 12 years	1,08,264	4,811	12,967	478	13,446	11.8	

Remissions were granted, more or less, every year from 1881-82 to 1892-93, and in all amounted to the enormous sum of Rs. 1,61,346, and on an average about Rs. 13,000 a year. During these 12 years there were two destructive floods—one in 1882 and another in 1889—and two severe cyclones—one in 1885 and another in 1880—besides minor floods and storms which are, as it were, regular occurrences. The damages due to floods are confined to the years in which they occur, and as they leave behind a layer of fertilizing silt, are in their after-effects beneficial. Not so are the cyclones, which affect not only the standing crops, but leave lands charged with salt, rendering them unfit for growing crops for the next year, and the severe ones, which cause loss of life, throw them out of cultivation for a number of years. The area damaged in the cyclone of 1885 was, it is stated, 44,000 acres lying in 270 villages, and some of this area was permanently laid waste, the rents of which had to be remitted for all the years down to 1892-93. In such a case, it would have been far more proper to have revised the settlement and excluded the areas thus permanently thrown out of cultivation, and not to have maintained the rent-roll burdened with demands which were known to be irrecoverable.

173. Remissions are very demoralizing and, at the same time, impossible to grant with any degree of fairness. The general principle in regard to remission adopted in estates under the Court of Wards' management is to strike off the balances found to be irrecoverable. This, as a general principle, is sound, but not applicable when vast areas have been laid desolate by floods or storms. Another mode, which is the usual mode, of granting remission is to base it on the actual quantity of land which has borne no crops. This is, however, open to two serious objections—(1) that it is in its effect demoralizing, giving remission to those in distress and those not in distress alike, and (2) that it is impossible to ascertain the exact quantity of damaged area for each individual raiyat. Actual measurement, field to field, is expensive and attended with the usual bribes and corruptions. A workable scheme, free from objection, for regulating the grant of remission of rents after unusual losses is of course difficult to devise. For petty losses no remission in any case is necessary. For severe ones, non-grant of remission would perhaps be inconsistent with the general policy of the liberal treatment of tenants, which is a conspicuous feature of the Court of Wards' management of estates. But one cannot be just and generous at the same time, and when he has to deal with a vast multitude it is best to be just rather than indulgent, for kindness is always demoralizing. The people have to learn self-reliance, and the management of the estate should teach it to them. Instead of granting remission as a matter

of grace, I would advocate the granting of *taluk* advances repayable with interest at 6½ per cent. which, if judiciously granted in proper time, would, in many cases, obviate any future necessity for remission; and the tracts subject to floods, in which necessity for granting remission frequently arises, may be treated under *taluk* or yearly assessment system, so that the demoralizing effect of remission may be reduced. The rents in this estate are comparatively low, the average incidence of assessment, per acre, being about Re. 1-3, and a good crop is ordinarily sufficient for two years' support, and no remission is required for losses (except from severe cyclones) in any single year. In cases of severe cyclones, lands being thrown out of cultivation for years together, may be treated as abandoned, and their rents excluded from *jamabandies*. Each case, of course, will have to be dealt with on its own merits, and no general rules, applicable in all cases, can well be prescribed.

CHAPTER V.

COERCIVE PROCESSES FOUND NECESSARY FOR COLLECTION OF RENTS.

174. The estate was under Government management for three years, 1862 to 1865, and since the latter year it has been
 Nett rental up to date. uninterruptedly under the Court of Wards. The

nett rental of it, exclusive of *khamar* and service lands, when the late Raja Padmanabh Bhanj made it over to Government was, it is stated, Rs. 60,923. In 1862 a summary settlement was made with the mustagirs for three years for Rs. 82,523. This amount probably included the rents of *khamar* and of some service lands. The nett rental exclusive of mustagirs' commission since 1865 has been as follows:—

YEAR.	Amount of Sadar jama.	REMARKS.
1	2	3
1865-66	Rs. 82,523	According to summary settlement of 1862.
1866-67	79,297	According to summary settlement year to year.
1867-68	78,384	
1868-69	81,782	
1869-70	89,105	
1870-71	91,112	According to the settlement of 1871 and 1872 concluded by late Babu Sapneswar Das.
1871-72	98,692	
1872-73	1,00,944	According to Mr. Macpherson's settlement.
1873-74	1,01,864	
1874-75	94,606	According to Mr. Beames's settlement.
1875-76	93,740	
1876-77	92,678	
1877-78	93,637	
1878-79	92,809	
1879-80	98,268	
1880-81	1,05,338	According to the settlement of 1880-82 which expired in September 1890, but was extended to 1893, excepting for miscellaneous rights, which were settled at increased rents, and the <i>Sadar jama</i> was thus raised for the last two years.
1881-82	1,05,741	
1882-83	1,06,643	
1883-84	1,07,172	
1884-85	1,07,982	
1885-86	1,07,741	
1886-87	1,08,341	
1887-88	1,08,285	
1888-89	1,08,223	
1889-90	1,08,105	
1890-91	1,07,750	Substantial increase in rental in these two years was due to settlement of miscellaneous sources of income.
1891-92	1,10,560	
1892-93	1,12,311	According to present settlement, exclusive of 10 per cent. commission for collection.
1893-94	1,28,898	

PART II.
CHAP. V.

175. What coercive measures were adopted for the collection of rents before 1880 are not well known, nor does it seem very necessary to make any detailed inquiries about them. It appears, however, that there were about 300 mustagirs from whom collections were supposed to be made, but, it is said, an army of peons, numbering 400 to 600, used to be quartered on the hapless tenants for the realization of rents due from them to the mustagirs, who seem to have been ordinarily unable to make collection without management help. Collections were, however, apparently not satisfactory even with such a horde of peons, and the then tahsildar, Babu Harekrishna Mitra, had to be empowered under Act X of 1859 to enable him to help the mustagirs more effectually.

176. The old system of quartering peons on tenants was continued till 1884, but their number had, some time before, been reduced to some 200. The daily allowance for each peon payable by the tenants or the mustagirs, as the case might be, was, it is said, 2 annas besides food and extras. The mustagirs, however, were gainers by this system, as they were permitted to levy a regular cess known as *piada meadi* from all the tenants at one anna per rupee of rent, and they used to realize another cess too, called *cheque lekhye*, at two pice per rupee of rent. This second cess was to enable them to get cheque receipts written for them. It seems they made a good thing out of their inability to write, for they got great deal more than they spent. These cesses continued to be realized down to 1887, when the then Collector, Mr. Henry, enabled me to stop them. The system of *thika* peons, as already stated, continued up to 1884, when sanction was obtained to engage paid peons for collection, and from 1884 to 1887 the practice was to employ paid peons, 50 in January, 30 in February, and 27 in March, and for the rest of the year on an average 20. Besides these, some *thika* peons continued to be sent out off and on. Since 1888 the number of paid peons has been reduced, and the practice of employing *thika* peons altogether stopped. Only this year, in the months of January and February, some 30 peons were engaged, of whom 22 were exclusively employed on collection work. The case this year was, however, exceptional. Now enhanced settlement rents had to be collected directly from some 30,000 tenants, considerably demoralized at the time by the mischievous tutorings of the mustagirs.

177. The following statement shows the number of persons the estate had to deal with during the currency of the last settlement:—

YEAR.	Number of Mustagirs.	Number of miscellaneous leaseholders.	Number of rent-free holders.	Total.	REMARKS.
1	2	3	4	5	6
1879-80 ...	261	28	290	579	
1880-81 ...	261	28	290	579	
1881-82 ...	248	52	290	590	
1882-83 ...	252	51	290	593	
1883-84 ...	259	55	290	604	
1884-85 ...	254	55	290	599	
1885-86 ...	279	59	290	628	
1886-87 ...	254	58	290	602	
1887-88 ...	282	63	290	635	
1888-89 ...	287	60	290	637	
1889-90 ...	291	60	290	641	
1890-91 ...	290	102	290	682	
1891-92 ...	292	91	290	673	
1892-93 ...	285	96	290	671	

The number of persons with whom the estate directly dealt was not great, but, as has been stated above, a great deal of work had to be done in collecting rents for the mustagirs, and a large number of peons were in employ for that purpose.

178. The subjoined statement shows the number of certificates issued from 1879-80 to 1892-93 and the amount realized thereunder:—

PART II.
CHAP. V.

YEAR.	Number of certificates.	Amount covered by certificates.	REMARKS.
1	2	3	4
1879-80 ...	83	Ra. 6,573 A. 0 P. 9	These certificates were issued by the then tahsildar of the estate for recovery of arrears due from the defaulting mustagirs. Four of these were disposed of by remission of the amounts covered by them and the rest were satisfied.
1880-81 ...	21	5,615 7 11	Ten of these certificates were disposed of by remission of the amounts covered by them and the rest were satisfied.
1881-82 ...	50	6,756 0 10	Only one of these was disposed of by remission of the amount covered by it and the rest were satisfied.
1882-83 ...	22	4,539 9 10	
1883-84 ...	40	834 2 11	Only nine, out of these, were against mustagirs, nineteen against the raiyats of villages under khas management, and twelve against rent-free holders for recovery of cesses due from them. One of these certificates was disposed of, the amount covered by it being remitted, and the others were satisfied.
1884-85 ...	6	548 0 0	Four against mustagirs and two against rent-free holders. All were satisfied.
1885-86 ...	1	228 12 6	Was satisfied.
1886-87 ...	89	292 6 2	All these certificates were issued for recovery of arrears due from the raiyats of some villages under khas management and were satisfied.
1887-88 ...	15	267 2 10	Of these, only one was against a mustagir and fourteen against rent-free holders. One of the latter was disposed of by remission of the amount covered by it and the rest satisfied.
1888-89 ...	1	110 8 1	Against a mustagir and was satisfied.
1889-90 ...	...	.....	One was against the lessee of a miscellaneous holding and the other against a raiyat. The amount of the former was remitted owing to the death of the lessee after issue of certificate, and the latter was satisfied.
1890-91 ...	2	235 4 4	
1891-92 ...	...	.....
1892-93 ...	...	.....
Total ...	230	26,000 8 2	

Considering the size of the estate, the number of certificate cases instituted during the last fourteen years has not been great. The position of estates under the Court of Wards is virtually that of private estates, but while the officers under private zamindars are in a position to adopt illegal means, those of the Court of Wards obviously cannot, and the help of the Certificate Act is, therefore, at times necessary to the latter. But of course this help should be very sparingly brought into requisition. During the last seven years of my tenure of office, I have issued only four certificates, two against mustagirs after they were dismissed, one against a miscellaneous lease-holder and one against a raiyat who was a recently dismissed mustagir and unwilling to pay rent due on his raiyati lands.

Part III.

Survey-Settlement Operations.

CHAPTER I.

BRIEF NOTICE OF CORRESPONDENCE PRELIMINARY TO THE PRESENT SURVEY AND SETTLEMENT OPERATIONS.

179. The present survey and settlement operations were, it appears, decided upon in furtherance of the general scheme recommended by the Director of Land Records in his No. 390T., dated the 7th July 1886, and enclosures, for the vigorous prosecution of such operations in Government and Wards' estates. This scheme met with a tempered support in the Board's No. 588A., dated the 12th August 1886, and a warm support in the Government of Bengal No. 2419—913L.R., dated the 1st December 1886, and was provisionally sanctioned in the Government of India's No. 209—88-2, dated the 6th May 1887, and Kanika and other estates accordingly came under professional survey and detailed settlement, with an express understanding that every effort would be made for the maintenance of records and the training of a local agency for the purpose. The scope of the scheme has been fully explained in the Board's Resolution, dated the 1st August 1887, and this estate has been mentioned therein as one among the several estates in which survey and record of rights were to be carried out.

180. The first letter received in this office on the subject of the present survey and settlement was the Collector's No. 1178G., dated the 12th October 1887, and as this letter explains the reasons for undertaking the operations, I think it proper to quote extracts from it at this place:—

"In forwarding herewith a copy of the Board's Resolution dated 1st August last, together with its enclosures, the undersigned has the honour to request that the Manager of Kanika will ascertain carefully and report as soon as possible how many mustagirs or close relations of mustagirs of the estate would be prepared to receive instruction in surveying as would enable them to carry out under proper supervision the details of survey, to prepare the record of rights, and subsequently to maintain them correctly if the estate is surveyed as proposed.

Each mauza should have its own local agency for the purpose, as the maps must be kept mauzawari.

"As the Kanika settlement expires next year, and as no detailed measurement of the whole estate has been made since 1842, it is desirable that the survey of the estate should commence next cold weather, and might be carried out contemporaneously with Kajang, and the Manager is therefore requested to give information as to the area under cultivation and waste and the extent of jungle, &c., to enable an estimate to be framed of the cost of survey operations.

"Briefly speaking, the informations required are as follows:—

1. Area of the estate;
2. Area of land under cultivation and arable land;
3. Area of waste land, jungles and rivers, &c.;
4. Number and area of rent-free holdings in the estate, and the proportion it bears to the total area of the estate as also to that of the cultivated area;
5. Approximate area of land reclaimed after the last settlement;
6. Number of mustagirs;
7. Whether there are joint mustagirs in any mauzas; if so, in how many, and whether these could not be splitted up into convenient sizes so as to be managed by one mustagir separately; and
8. Educational status and age of mustagirs or their relatives who will be trained in surveying, and whether they can be entrusted with the work of demarcating the village boundaries and the exterior boundaries after they are properly trained."

181. The report called for was submitted in this office No. 413, dated the 12th November 1887, and a year later an application for the survey of the estate under Act V (B.C.) of 1875 appears to have been made in the Collector's No. 1006W., dated the 29th December 1888, and in the Board's No. 96A., dated the 28th January 1889, and sanctioned by the Government of Bengal in their No. ⁴²⁴/₁₂ L.R., dated the 2nd February 1889. A notification ordering the survey of the estate and appointing the Collector of Cuttack to be Superintendent and Mr. R. B. Smart, Mr. C. S. Kraal, and Mr. Sakhawat Hoessein to be Assistant Superintendents of the Survey, was published at page 90 of the *Calcutta Gazette* of the 6th February 1889. In the Collector's No. 513W., dated the 30th March 1889, necessary powers were delegated to me, and the required proclamations in English and Uriya, received with the above letter, were duly published in the *mal-cutcheries*, markets and other important places in the estate, as well as in the subdivisional cutcherries of Kondrapara, Jajpur, and Bhadrak. For the survey of the estate was thus settled the law and the agency—the law being Act V (B.C.) of 1875, and the agency being that of the professional survey party.

182. As regards the settlement of the estate as distinct from its survey, I enquired in my No. 370, dated the 9th November 1888, if it was to be made under the Tenancy Act, and the Collector's reply being in the negative, I enquired again in my No. 417, dated the 19th December 1888, as to the law under which it was to be made, but no definite reply was received. About this time it appears the Commissioner of Orissa raised in his No. 51W., dated the 31st January 1889, this very question of settlement regarding the adjoining estate of Kujang, and the Director of Land Records, in his reply No. 220, dated the 9th February 1889, pointed out that there was no law under which settlement of a Ward's estate in Orissa could be made; that any arrangements made for fixing rents must be amicable arrangements between the raiyats concerned and the Manager, and that if such arrangements cannot be made and enhancements on existing rents are deemed desirable, such enhancements must be made through the Civil Court. The case of Kanika, the Director added, was similar, and its settlement must also be made by the Manager of the estate. The Board in their No. 264A., dated the 26th February 1889, sanctioned the proposals of the Director of Land Records for the amicable settlement of the Kujang estate, and, by implication, a similar settlement for the Kanika estate too.

In his No. 467T.—A., dated the 11th April 1889, the Director of Land Records having enquired from the Commissioner of Orissa if the services of a Settlement Officer would be required in connection with the Kanika Ward's estate now under survey, the latter in his No. 215W., dated the 30th April, recommended an amicable settlement to be conducted by the Manager who, if necessary, might be given the help of an Assistant Manager. When this letter went up for sanction, the Board, before according that sanction, wanted to know "what were the amicable arrangements which the latter (the Manager) was to carry out, on what principles he was to proceed, what instructions had been issued or were to be issued to him, and what check it was proposed to keep over the Manager's action." In communicating to me the above remarks of the Board, the Collector in his No. 67, dated the 29th July 1889, asked me to prepare rules for the settlement of the estate, and I drew up and submitted in this office No. 294, dated the 27th August 1889, a full report on the subject which has since been printed with abstracts of the Collector's, the Commissioner's, and the Director's remarks in parallel columns, and the Board's orders in the last column of the *présis*. In this report were discussed the question of soil classification, to watch which, while being entered by the Survey amins in the khasras, the appointment of a special officer was recommended; of rates, the tables for which were given showing existing ones and areas settled at each; of enhancement of rents, which it was recommended should not exceed 10 per cent. including assessment of new lands; of tenures; of hukumnamas, which it was suggested should be granted to raiyats instead of copy of khatian entries; of mustagirs, regarding whose appointment some suggestions were made, with a view to improve the existing class; of miscellaneous rights, which were

PART III. recommended to be settled by public auction, and of waste lands, the existing
 CHAP. II. system of the reclamation of which was described and some suggestions for
 embanking certain areas in places exposed to sea waves, offered, with a view
 that protection to life, in the event of storms and cyclones, might be afforded.
 The correspondence subsequent to the submission of this report will be discussed
 under appropriate heads in the following chapters.

CHAPTER II.

PRESENT SURVEY OPERATIONS.

183. Towards the close of September 1888 I was asked to meet Colonel
 Cowan, Deputy Superintendent, in charge Survey
 Party No. 8, and I accordingly met him, when
 Demarcation. I was verbally explained how temporary demarcation was to be done. The
 work was taken in hand at once, and the village boundaries were, with the help
 of old measurement papers, demarcated by the collecting agency, with temporary
 mud pillars, with bamboo sticks fixed in the centre, to distinguish them from
 other similar pillars. This demarcation brought to light several boundary
 disputes with the adjoining estates, and a double line of pillars were put up to
 indicate the disputed areas. The Government canal and the District Board
 roads and roadside lands were afterwards similarly demarcated with the help
 of the traces received from the Executive Engineer's and the District Board's
 offices. The time allowed for this work was, however, very short. The
 traverse party arrived in the estate in December 1888, and the whole estate
 had thus to be demarcated in about two months' time; but the work was
 finished somehow, and it has been acknowledged in the 12th paragraph of the
 Survey report, dated the 10th August 1891, which says:—

"The temporary demarcation of the village boundaries was done, under the orders of the
 Manager of the estate, by the mustagirs or by the headmen of the villages, and was satis-
 factorily completed in time to admit of the traverse survey being finished in season 1888-89."

184. The traverse camp arrived in the estate, as already stated, in
 December 1888, and took the field almost directly.
 Traverse survey. Mr. Kraal, the officer in charge, started at first with
 a small number of sub-surveyors, and later on, his establishment was increased
 as the sub-surveyors became available from the Kujang estate. The work
 was done as fast as it could be done. By the end of June following, the
 traverse survey of all the demarcated villages and the topographical survey of
 50 square miles of jungle tracts, were finished. In a few uninhabited villages
 stone embedding work could not be done that season, owing to the breaking out
 of cholera in the estate at the time. The entire survey camp consisted of
 100 men, of whom eight fell victims to this epidemic, and the remainder of the
 work had to be left over to be completed along with the cadastral survey next
 season. Free labour was supplied for all traverse work except for line clearing
 in jungle tracts, which was paid for. Some 50 sheets were prepared and made
 over to the officer in charge cadastral survey before the close of March 1889,
 and the rest were subsequently prepared, in the recess, at Cuttack.

185. Mr. Smart, who, it was arranged, would take charge of the cadastral
 camp in Kanika, came to the estate in December
 Training of local agency for survey work. 1888, to form classes for the training of mustagirs,
 their relations and nominees, and seven classes were
 opened in the different parts of the estate in order that the pupils might
 attend them from their homes. The instructors were supplied with three
 coolies each, and each cooly was paid 9 pies per diem, and the total cost of the
 training amounted to Rs. 1,067-2-6. A great deal of persuasion had to be
 used to induce the pupils to attend the classes, and altogether 148 attended, of
 whom some 50 were tried in April following when an attempt was made
 from Kujang, where Mr. Smart was then working, to begin cadastral survey of
 some 50 villages in Kanika, the sheets for which were received from the officer
 in charge of the traverse survey. The selection of villages for the commence-
 ment of work by the new and untried young boys of the estate was unfortunate.
 These villages were all in the south, where fresh water in the hot months is

usually scarce and the climate of which is generally unhealthy. Few men from that part had learned survey, and those from the upper portions of the estate were naturally afraid of working in the hot months in the south, especially as most of them were young boys accustomed to the tender care of their parents and had never lived away from their homes. By re-arranging the villages, however, I was able to induce them to make a start. The work this year was by way of an experiment, to see how the local men would do. Some 16 square miles were, however, amidst difficulties, surveyed by them before June 1889. They worked better next season, when some of them worked very well, some fairly well, and some had to be helped through the whole course of their work; but all were very slow workers. The work of one mustagir was, Mr. Smart told me, absolutely correct, and the check lines failed to discover any error in it, not even amounting to a hairbreadth, but he was only able to do 2 or 3 acres a day!

186. In December 1889 the cadastral camp arrived in the estate.

Agency for detailed survey. Mr. Smart, the officer in charge, camped at Ganja, its head-quarters, and his Assistant, Mr. Barker, was sent out to the south. Of the local men, who had had training in survey in the previous year, only 120 turned up, and with this number of amins it was at once felt, field work would not be finished in one season, and 180 Uriya amins, who had, in previous seasons, worked with Mr. Smart in Angul, Banki, and Kujang, were also employed to get the whole of the field work done before recess that year, and it was accordingly finished.

187. The system of cadastral survey was based on Colonel Barron's handbook, and instructions for filling up the khasras were drawn up by me and approved by the Collector, and these were supplemented by especial instructions issued by the officer in charge. The whole of the instructions drawn up for the guidance of the amins and the supervising officers were printed, and a copy furnished to each.

188. Along with measurement, village maps were prepared in pencil, and, on the completion of this work, the khasras, with the following headings, were filled up:—

1. Fields: (a) Number—(1) in former settlement, and (2) in present settlement; (b) Boundaries;
2. Name of chak;
3. Nature of tenure;
4. Name of tenure-holder or raiyat, father's name, caste, residence;
5. Name of under-raiyat, father's name, caste, residence;
6. Area in acres and decimals;
7. Method of irrigation;
8. Class of soil;
9. Cropped area: (a) Crop; (b) Bazo-fasal—(1) area in acres and decimals; (c) Beali—(1) area in acres and decimals; (d) Saradh—(1) area in acres and decimals; (e) Dalua—(1) area in acres and decimals; (f) Dofasal—(1) area in acres and decimals; (g) other kinds—(1) area in acres and decimals; Gharbari;
10. Uncropped area:—(a) Description of land; (b) area in acres and decimals; and
11. Remarks.

The form for the khasras was, with slight alterations, the same as was adopted for the survey of the Banki and the Angul estates. The system for khasra writing was to number each field in the map, to enter its necessary particulars in the khasra, and to fill up parcha slips showing only the number and the name of the holder of the field. The fields in the maps were numbered as the khasra-writing was being finished and parchas prepared. The parchas were made over to the recorded tenant as each number was finished, and were taken back when the work of record-writing was completed. Had the parchas contained all the entries of the khasras, and a printed instruction at the top requiring each tenant to produce them, within a fixed time, before the Settlement Officer with such objections as he had to make against any of the entries, they would have simplified the subsequent attestation considerably,

PART III. and rendered the existence of undiscovered mistakes in the records almost impossible. Under the system followed, the parchas which contained only the name of the tenant and the number of the field served no useful purpose.

CHAP. II.

189. The supervision of field work was close and careful. Over every 8 to

Supervision of field work. 12 amins there were inspectors, over the inspectors were two head amins, and over them all were three European officers, Mr. Smart, the officer in charge, and his two assistants, Messrs. Barker and Pyster. Mr. Barker had charge of the villages of Elakaha Kerara and Kaladwip and of some of Elakah Chhamuka; Mr. Pyster, who joined some time later, held charge of Elakah Panchmuka, and the villages close to head-quarters were supervised by Mr. Smart himself. The khasra entries of 16,051 fields were checked by the European officers, and of 67,884 fields, by the native assistants, and the total entries of 83,935 fields, or 40·7 per cent. of the whole number, were thus checked. The Deputy Superintendent, Mr. Patterson, in charge of the party, visited the estate twice and took some active share in the supervision, and it was mainly due to him that all field work was finished before the close of the season.

The Settlement Officer, Mr. Datta, joined early in February 1890, and he was in time to supervise the khasra-writing work. But his supervision of the field work was impaired by disagreements with the Survey Officer.

Preparation of maps and records in office.

190. As villages were finished, their maps and khasras were deposited in the Survey office at Ganja, where the former were inked, and the khatians, with the following headings, prepared from the khasras:—

1. Name of tenure-holder or raiyat, father's name, caste, residence;
2. Number of under-raiyat's khatian, if any;
3. Nature of tenure;
4. Khasra number of field and boundaries—
 - (a) Number;
 - (b) Boundaries;
5. Rent-paying area in acres and decimals—
 - (a) Crop;
 - (b) Bazo-fasal—(1) 1st class, (2) 2nd class, (3) 3rd class;
 - (c) Beali—(1) 1st class, (2) 2nd class, (3) 3rd class;
 - (d) Saradh—(1) 1st class, (2) 2nd class, (3) 3rd class;
 - (e) Dalua;
 - (f) Dofasal—(1) 1st class, (2) 2nd class, (3) 3rd class;
 - (g) Other kinds—(1) 1st class, (2) 2nd class, (3) 3rd class; Gharbari;
6. Not rent-paying area—(a) Gharbari, (b) other kinds;
7. Total area;
8. Rate of rent;
9. Remarks;
10. Rent recorded as demandable by Settlement Officer—
 - (a) Class: (1) Bazo-fasal, 1st class, 2nd class, 3rd class;
 - (2) Beali, 1st class, 2nd class, 3rd class;
 - (3) Sarad, 1st class, 2nd class, 3rd class;
 - (4) Dalua;
 - (5) Dofasal, 1st class, 2nd class, 3rd class;
 - (6) Other kinds, 1st class, 2nd class, 3rd class;
 - (7) Gharbari;
 - (8) Total;
 - (b) Area in acres and decimals;
 - (c) Rate;
 - (d) Amount; and
11. Remarks.

This work, which is generally done in the recess, was commenced in the survey camp office in order to make over the records and maps of some villages to the Settlement Officer to enable him to make preliminary attestation for the submission of his rate report, and the records of 54 villages were so made over to him before the close of the field season. The records of the remaining villages were afterwards prepared in the Survey office in Cuttack and gradually sent therefrom.

191. During the whole course of the survey operations both myself, my Part III.
Chap. III.
 Assistance rendered by the establishment, and the people of the estate generally, rendered willing help to the Survey officers, whose people and the management of the estate. difficulties were removed as far as possible. The wages for coolies, for cadastral work, were charged at anna 1 a day, and for those working in jungle tracts away from homes, at annas 2 a day. In paragraphs 26 to 28 of the Survey report, dated the 16th August 1891, our help is suitably acknowledged. As regards the attitude of the people the report says:—

“The village people on the whole have rendered aid to the survey establishment, and in no instance was there any opposition offered; there was some delay in getting local labour to work with the survey parties in the jungle tracts, as the men were not willing to work there on account of the unhealthiness of the tracts and the absence of fresh water. The Manager, however, arranged to have relays of men sent once a week fully provisioned to the survey squads, and in this way eased off the hardships of the villagers by their not having a absence from their homes.”

The assistance rendered by the civil authorities is thus acknowledged in the 28th paragraph of the report:—

“The Manager of the Kanika estate, Mr. S. S. Hossain, and the Collector of Cuttack, Mr. Tute, rendered much aid to the survey establishment. The Manager in particular was most helpful in the arrangements he made for cooly labour, boats, and provisions, and did his best to meet as promptly as possible all the requirements of the Survey Department.”

CHAPTER III.

BOUNDARY DISPUTES.

192. Almost all along the exterior boundary there were disputes with the adjoining estates, and the total length in dispute was 82 miles. They were at first arranged to be decided by me, but some of the proprietors of the adjoining estates, with whom there were disputes, objected to my taking them up, and some of them were then made over to the Subdivisional Officer, Kendrapara, and afterwards to the Settlement Officer of this estate for disposal. The Settlement Officer, however, left the estate before deciding them, and all the cases came back to my file, the Commissioner having held that my position as Manager did not disqualify me for deciding them.

I was gazetted as an Assistant Superintendent of Survey under Act V of 1875, and under that Act the disputes were taken up; but it was soon found that the fact of possession could not be satisfactorily proved in regard to the waste lands about which there were disputes in most cases, and eventually they were amicably settled for six out of seven estates (including those pending the disposal of which the village records were incomplete), and the boundary line fixed for 50 out of 82 miles. There remained pending for disposal the disputes with the adjoining estate of Aul which have not yet been settled.

193. As the disputes with the Aul estate are not likely to be settled, Account of previous dispute with the adjoining estate of Aul about an island. I think it necessary to record, for future use, all the important facts concerning them. The first dispute refers to a small island called “Jagannath Prasad.”

In order that the present disputes may be fully understood, it is necessary to refer to a previous dispute which was settled by Mr. Bolton, the then Collector of Cuttack, and which has been fully explained in his No. 59, dated the 28th January 1887. This letter is an important document, and I deem it necessary to quote it in full at this place:—

No. 59, dated Cuttack, the 28th January 1887.

From—O. W. BOLTON, Esq., Collector of Cuttack,
 To—The Commissioner of the Orissa Division.

I HAVE the honour to submit the following matter for orders.

2. The accompanying sketch represents roughly the portion of the district lying between and in the vicinity of Aul and Ganja, and shows the Kharana, with its peculiar loop, to be the boundary between the two kharas of Aul and Kanika. At some period apparently anterior to the settlement of the provinces, a char to which the name of Jagannath Prasad Dhan

PART III. was given, formed in that river, next to mausa Barajore-munha on the Aul side—side A in
 CHAP., III. the sketch. It was separated from the mausa by a channel which has since disappeared, and
 being nearer to Aul, ought rightly to have become the property of that estate. It was, however,
 claimed by the Kanika Raja, and was after a good deal of dispute surrendered to him by the
 Aul Raja.

(Here was given the sketch map.)

3. The char having thus become the property of Kanika, was measured in 1250 F.E. (1842) and again in 1273 F.E. (1865), and the measurement papers of those years are extant. The Kharsua flowed then, and continued to flow for some years later, along the channel which I have noted as now dry except at high tide; but in 1876 it burst through the narrow neck of land at the base of the loop, and a short cut which has since been known as the Gargari was formed, as indicated by the lines in red ink. In 1883 a char appeared at B, and both Aul and Kanika laid claim to it, but it was actually taken possession of by Kanika, on the contention that it was partly a re-formation *in situ* of the southern end of Jagannath Prasad Dian, which, it was alleged, the Gargari had washed away in 1876. The new portion of the char was claimed by Kanika as an accretion to the re-formation. The Aul Raja contended that Jagannath Prasad Dian never extended so far south as B, and that the latter was therefore an entirely new char, and as such an accretion to his estate.

4. The dispute came before Mr. Currie, but could not be settled by him, as he desired, but was unable to make a local enquiry, and Babu Nityanand Ghosh, Deputy Collector, was subsequently directed by Mr. Toynbee to survey the spot according to the old measurement papers and endeavour to fix the boundaries of Jagannath Prasad Dian. This he has done, and with his report before me I made myself a local enquiry a few days ago, in order to clear up one or two doubtful points, in company Raja of Aul.

5. The Kanika Manager's is that extended from
 1 to 3 as shown in the sketch. The extensions from 1 to N.E. and from to the S.E. he

Mr. Wright, on the other hand, maintains that the char extended only from 1 to 2, and that its southern extremity thus terminated in the present bed of the Gargari. He admits that the north-eastern extension from 1 is an accretion, and to this the Raja of Aul has never laid claim, but he denies that any part of B is a re-formation "*in situ*," and therefore claims it as an accretion to Aul.

Part III.
Chap. III.

6. The Sub-Deputy Collector's measurements show that the southern extremity of the Dian terminated, as alleged by Aul, in the present bed of the Gargari, if a length of 9 feet 6 inches be given to the *padiks* or poles. This is the admitted length of the pole used in both Aul and Kanika, but the Manager of Kanika states that measurement is always made in that estate by turning the pole in the air and not on the ground, and that the actual length thus given for each pole along the ground is not the standard 9 feet 6 inches, but 10 feet. He urges that measurement should be made in the same way in the present case, and the effect of this as found by the Sub-Deputy-Collector is to extend the southern extremity of the Dian into B, so as to bring some 4 *mas* of land in that plot into the Dian. Mr. Wright, however, denies that the mode of measurement alleged by the Kanika Manager is the custom of Kanika, and he further urges that, even if it were so, measurement should not be made in that way in a disputed case like this. I agree with him that it is not right to apply the alleged custom in the present case, and I do not believe that a Civil Court would recognise the custom, unless it was specifically proved, which could not be done, that the Dian was actually so measured in 1842 and 1865. I am therefore of opinion that the standard length of 9 feet 6 inches only should be ascribed to the pole in now ascertaining the length of the Dian from the old field books. This brings the southern extremity of the Dian where it is asserted to lie by Aul, and I accordingly consider that Kanika has no right to any portion of B. This being the case, I recommend and request your sanction to the surrender of B to Aul. The char is not an extensive one, and it will probably never be worth more than a few hundred rupees. Kanika now realizes Rs. 15-0-8 per annum from it, and I request sanction to the striking off of this sum from the rent-roll of the estate on its surrender.

7. Even if Jagannath Prasad Dian did extend on to a portion of B before the irruption of the Kharsua through the Gargari channel, I should recommend under existing circumstances that we should not lay claim to any part of B. That char is now separated by a broad stream from the rest of the Dian, and this forms a good boundary. If we crossed the stream, there would be an ill-defined boundary and disputes would occur. The accretion from 1 to the N.E. has compensated Kanika for any loss which may have occurred by the opening of the Gargari, and the estate should be satisfied with this, especially as it ought never originally to have got possession of the Dian at all.

8. I have, in reporting on this matter, avoided minor details, because they would only have made the case less easy of comprehension to one who has not had the advantage of a personal inspection of the Dian and discussion with the parties.

194. One of the grounds on which Mr. Bolton recommended the surrender

The dispute decided under Survey Act.

of the new char to the Aul estate was to avoid future disputes (*vide* his paragraph 7), but his anticipations in this respect have not been fulfilled; for, soon after this surrender, the Aul Raja laid claim to a portion of the old island itself, which was admitted to be in Kanika's possession since before 1842. The accretion in the N.E. was also admitted to belong to Kanika (*vide* paragraph 5 of the Collector's letter), and this portion in particular the Aul Raja claimed after the above surrender. For a time the raiyats of the two estates fought about the crops raised in this island, and the disputes were eventually decided by me under the Survey Act some time in 1889, and possession was decreed to Kanika. This decision, before being delivered, was submitted to the Collector as Superintendent of Survey, in order that he might have an opportunity of judging as to the fairness or otherwise of my decision. This procedure was considered necessary, as the dispute was decided by the Manager of one of the estates concerned.

195. Subsequent to this decision under the Survey Act, the Aul Raja in-

Civil suit about the dispute.

stituted a civil suit in order to recover possession of a portion of the island. While the suit was pending an endeavour was made to have it amicably decided. I was willing to recommend the surrender of the whole island to the Aul Raja on his paying to Kanika the sum of Rs. 1,000 on condition that a permanent boundary was fixed between the two estates. This condition, which was a *sine qua non* for the compromise, was unfortunately omitted from the reference which the Government Pleader made direct to the Collector who, basing his proposals on the pleader's recommendation, suggested the sale of the portion of the island claimed by the Aul Raja in his for the sum of Rs. 1,000. This proposal was sanctioned by the Board in their No. 137A., dated the 16th April 1891. Before filing the compromise deed I wanted the portion claimed to be demarcated and shown in a map, but the Aul people excuse after excuse for not complying with this simple request, and under

PART III. the pressure of the Government Pleader, who said the suit could no longer be postponed, I had to give my reluctant consent to the filing of the compromise petition without previous demarcation of the land claimed, which, according to the compromise, was decreed to the Aul Raja on his paying Rs. 1,000 to us. After this I pressed the Aul Raja for demarcation, who in doing so wanted to take more than he had actually claimed in the suit, and this gave rise to a fresh dispute, to settle which I suggested that the Raja should himself arbitrate, but to no effect. Some time after this the Aul Raja had his decree executed and possession delivered by the Civil Court, which was done without any notice to me. I explained all the above facts to the Collector, who kindly promised to speak to the Raja about it, and he did so, but the Raja is disinclined to move in the matter at all, and there is no longer any hope of any peaceful settlement of the dispute.

CHAB. IV. 196. There is also a river dispute with the Aul estate. The two rivers, the Kharsua and the Brahmani, form the common boundary between the two estates and belong to them half and half. These rivers are, however, tidal, and their water level is never stationary, and the question arises whether, for purposes of division, they should be taken at high water or at low water. The bank is one side steep and the other side alluvial, and it is therefore of importance for Kanika to have the rivers divided at high water. The Government Pleader was consulted on this point, and he has given his opinion that in the case of tidal rivers, their beds are taken at high water. The other side does not of course accept this opinion, and the two estates are therefore not agreed. The division of the rivers is not very necessary for purposes of the present survey except to obtain the total area of the estate. The rivers have been shown both at high and low water, and the alternate dots on both sides in the map indicate how they are held.

197. I was willing to recommend the acceptance of the division of the beds of the rivers at low water and to surrender the whole of the island for Rs. 1,000 on condition that the boundary line, as now shown in the map, was accepted by both the estates as a permanent boundary line, so that any change in these shifting rivers would not affect the rights of either of the estates, and the line now laid down would continue to be the boundary line irrespective of the position of the rivers. The acceptance of my proposal would have rendered any disputes in the future impossible, but the Aul Raja could not understand or accept it, and there is little chance of any amicable arrangements with him. As no present interests of the Kanika estate are involved, I am afraid recourse to law courts will not be sanctioned, and in placing on record all the circumstances connected with the disputes between the two estates, I have in view the future interests of the estate for which the Raja of Kanika, when he gets his killah, might think it worth his while to fight.

CHAPTER IV.

CLASSIFICATION OF SOIL.

198. At the time of the commencement of the cadastral survey no Settlement Officer having been appointed, I was expected to carry on all the settlement work, and the Survey Officer having asked me to draw up instructions for the guidance of the amins for filling up khasra columns, I drew them up and submitted them to the Collector for approval. My instructions regarding soil classification were very simple. Almost the entire cropped area in the estate is under rice, and consists almost exclusively of rich clay, charged here and there with sand or salt. So far as the actual fertility is concerned, rice lands are nearly of one quality, but the outturn of crops is affected by their position and situation. Lowlands, which receive the drainage of the surrounding fields, are rich in plant food and seldom suffer from deficiency of rainfall, and they are considered by the people as of first class. Lands of recent alluvial formation or receiving annual deposit of fertilizing silt are also regarded as of first class, and so these two descriptions of rice lands the amins were instructed to enter under the first class. Lands higher than those of the first class and not likely to retain moisture till ripening time were to

be entered under the second class, and the rest of rice lands containing a mixture of sand were to be recorded as of third class. Suitable instructions were also given for classifying other kinds of lands, which are of limited quantity in the estate. These instructions were drawn up in consultation with the leading cultivators of the estate, and were such as could be easily understood by the half-educated amins who were to write up the khasras.

199. Soon after the cadastral survey was commenced, the orders of the Board on my No. 294, dated the 27th August 1889, referred to in paragraph 182 above, were received. The orders regarding the soil classification, which was the first subject discussed in the report, were:—

The appointment of a Settlement Officer and the extent to which classification was checked by him.

"The classification of soil is, as the Director remarks, a most important duty, and it must be carried out under the close supervision of the Settlement Officer. The appointment of Mr. Datta has been recommended. The work of classification must be done by him with the utmost care, and he must personally inspect as many villages as possible. The number of classes should not be unduly multiplied. It is desirable to have as few rates as practicable, consistently with fair assessment, and if there is any doubt as to the class to which a particular plot should be assigned, it should be placed in a lower rather than a higher class. Separate classification of small patches of land differing in quality from the bulk of the same holding should, if possible, be avoided. Simple and compact classification will be more intelligible and acceptable to the tenants."

The Settlement Officer, Mr. Datta, joined the estate in February 1890, when khasra work was being commenced, and he was asked by Mr. Smart as soon as he came if he wished to make any modifications in the instructions already issued by me, and none having been made, the original instructions were followed. The Settlement Officer set himself to check survey classification as required in the orders quoted above, but for reasons which it is not necessary to mention he was unable to do it, and soil classification was not checked in the field as was originally intended.

At a later stage, when the Settlement Officer received the records and commenced settlement, he raised the question of classification, and his procedure was objected to by Mr. Finucane, the then Director of Land Records, and disapproved of by the Board in their No. 699A., dated the 25th June 1891.

200. On my taking up charge of settlement in July 1891, the first question I had to decide was, whether I was to accept the survey classification or revise it all over. This work was done under close departmental supervision. Over 40 per cent. of khasra entries were checked by the European assistants and the native inspectors. The instructions for classification were simple and easily intelligible. I tested the survey work in two villages, in one of which 150 acres were found of first class against 151 acres entered in the survey records, and in the other there was no difference. For the 523 villages for which rate statements were prepared, the result of the classification was found to stand thus:—

Reasons for eventual acceptance of survey classification.

Class.	Area in acres according to survey records.	Area in acres according to last settlement.
1st class ...	25,615	24,050
2nd " ...	36,855	28,919
3rd " ...	24,313	25,356

The survey classification was thus higher than that of the last settlement, and was on the whole tolerably fair, and I felt I could not improve upon it without an expenditure of time and money, which, to my mind, seemed unreasonable. There are over two lakhs of khasra numbers, and the work of soil mapping would have taken considerable time. As 15 months had already been spent on settlement, I thought no useful purpose would be served by spending a lot of time more on reclassification, especially as neither the landlord nor the tenantry would have benefited by it: both on the other hand would have suffered, the proprietor by having an additional cost thrown upon him, and the tenantry by being subjected to protracted settlement operations.

PART III.
CHAP. V.

The work of classification is really very difficult, and to secure absolutely correct work is simply impossible, for it is no easy matter to judge of the fertility of soil by merely looking at it. The work of an honest and a venal amin might be equally bad. I placed my views about the Kanika survey classification before the then Director of Land Records, and with his sanction in his D. O. No. 296, dated the 30th July 1891, I decided to accept the survey work. This work is, on the whole, fair, but of course it is not expected that it would be fair to each individual raiyat. I have, however, minimized all possible hardships resulting from bad classification, as will be shown when explaining the principles under which assessment has been made.

CHAPTER V.

ATTESTATION.

201. The records prepared and supplied by the Survey office for each village consisted of:—
What records supplied by the Survey party.

- (1) Trace;
- (2) Khasra, including totals of khasra pages, milan khasra, statement of crops, and statistics of population and cattle;
- (3) Khatian, including terijes of cultivators and tenure-holders and under-tenants; and
- (4) Dispute lists.

202. The records from the Survey office were received in the Settlement office during 1890-91 and 1891-92 as detailed below:—
Receipt of records by the Settlement Officer.

Of 10 villages in January 1890					
" 4	do.	March	"	ditto	Mr. Datta.
" 40	do.	April	"	ditto	
" 88	do.	July	"	ditto	
" 119	do.	August	"	ditto	
" 136	do.	September	"	ditto	
" 138	do.	October	"	ditto	
" 38	do.	November	"	ditto	
" 3	do.	December	"	ditto	
" 17	do.	October 1891	"	ditto	me.
" 11	do.	May 1892	"	ditto	
" 8	do.	June	"	ditto	
" 9	do.	July	"	ditto	
" 9	do.	August	"	ditto	

630

203. The records of 576 villages were received by Mr. Datta by December 1890, and he had thus enough work given him for attestation, which he commenced from May 1890, and by the time he left, viz. 14th May 1891, the muharrirs under him had attested some 346 villages, of which how many were attested by him cannot be ascertained from the office. He had probably attested some 200 villages, but his work was partially done, and it has come under my revision.
Amount of attestation done in Mr. Datta's time.

204. I took charge of settlement in July 1891, when the season was unsuitable for field work; and there being other work, especially the preparation of rate report to do, regular attestation was not commenced till October following. During the survey year, i.e., from October 1891 to September 1892, attestation was finished for about 500 villages, and the remaining villages were attested along with settlement in the following season. I was thus employed on this work from October 1891 to June 1892, excepting 23 days spent on pure management work, and again for about two months in 1893, and the total number of days spent over it was 263, and the rate at which it was done was
Attestation where and in what time done by me.

814 khaara numbers a day. During the course of this work I was in camp in the following places in the estate:—

PART III.
CHAP. V.

1. Sarna ...	} Panchmuka.	14. Bhitargarh ...	} Kerara.
2. Jaladharpar ...		15. Rajgarh ...	
3. Amligon ...		16. Kararagarh ...	
4. Sabudhia ...		17. Balikona ...	
5. Matto ...		18. Dakhindandi ...	
6. Tottapara ...		19. Katna ...	} Ohhamuka.
7. Balipada ...		20. Anantapur ...	
8. Panchtikri ...		21. Burote ...	} Kerara.
9. Khamarsahi ...		22. Rajnagar ...	
10. Sankhori ...		23. Kherang ...	} Panchmuka.
11. Dhamra ...		24. Kandaragaria ...	
12. Righagarh ...	} Ohhamuka.	25. Bansara ...	} Kaladwip.
13. Ghariyamal ...		26. Bejoynagar ...	
		27. Penth ...	
		28. Satbhaya ...	

Out of 458 inhabited villages in the estate, I visited 438, doing attestation on the spot. The attestation of uninhabited villages was either done from the nearest inhabited village or from camp which used to be somewhere in the centre of the villages under attestation.

205. Khatian slips or parchas not having been always distributed among

Procedure for attestation.

the tenants, and those which were distributed not having been (as explained in paragraph 188

above) of any practical use, attestation was done under the old system by muharrirs; and the procedure adopted in his testate will be best explained by the instructions in Uriya given to the attestation muharrirs for their guidance, a translation of which is given below:—

1. On a village being allotted to an attestation muharrir he will take the following, giving receipt therefor:—

- | | | |
|---|-----------------------|--|
| <ul style="list-style-type: none"> (a) Trace; (b) Khaara; (c) Khatian; (d) Petitions of objection; (e) Dispute list; (f) Bhowria (g) Warija (h) Bhean | } of last settlement; | <ul style="list-style-type: none"> (i) Notice in duplicate to <i>thani, pahi</i> and <i>shikmi raiyats</i> as well as to <i>lakhrajdars</i>, mortgagees and <i>tonki-holders</i> requiring their attendance; (j) <i>Parwana</i> in duplicate to mustagir, directing him to file <i>patta-talika</i>, i.e., existing rent-roll of the village on the date to be fixed by the muharrir; and (k) Blank <i>terij</i> forms. |
|---|-----------------------|--|

2. On arriving at the village he will have one copy of notice (i) hung up in some conspicuous place in it, and on the back of the second copy obtain the signature of the mustagir and some of the principal raiyats, and make over one copy of *parwana* (j) to the mustagir, taking his acknowledgment on the second copy. These receipts are to be filed with his report.

3. He is then to enter in the blank forms of *terij* (k) the names of the tenants, following the alphabetical order of the khatian, which order is also to be followed by the mustagir preparing his *patta-talika* (existing rent-roll), and he is to be instructed accordingly.

4. He will then attest according to the instructions given below:—

- (a) With the raiyats and the mustagir he will go over all the fields, explaining to the tenants concerned the entries against each khaara number.
- (b) In the course of this attestation if the division of any numbers into fractions is found necessary, the plots in the trace are to be marked in pencil and the fact noted in the report, so that the areas of the fractional parts may be extracted, and the budders prepared in the office.
- (c) *Rajsarkar lands*, i.e., those not recorded at the last settlement in any tenant's name, are to be classified and report drawn up as directed below:—

I.—*Lait* is to be divided into two classes:—

- (1) Culturable waste, i.e., lands which are fit for cultivation and to the cultivation of which no objections are made;
- (2) Unoccupied homestead, i.e., lands suitable for being utilized as sites for house building or for growing miscellaneous crops.

II.—*Nalaik* is to be classed as follows:—

- | | |
|--|---|
| <ul style="list-style-type: none"> 1. Roads and footpaths; 2. Banks (embankments); 3. Burial grounds; 4. Orchards; 5. Tanks, ponds, and ditches; 6. Irrigation channels; | <ul style="list-style-type: none"> 7. Water reservoirs; 8. Grazing ground; 9. Cattle-path; 10. Creeks; 11. Rivers, and 12. Jungles. |
|--|---|

PART III.
CHAP. V.

5.* On the completion of the field work the following reports are to be prepared:—

(a) *Report on admitted errors and mistakes.*

This report will show the khasra numbers entered by mistake against the names of wrong persons, if so admitted by them. These admissions are to be verified by the signature of the parties concerned.

(b) *Report on lands entered as rajsarkar in the last settlement and since brought under cultivation.*

This is to be divided into two parts. In the first part are to be mentioned rajsarkar lands to the cultivation of which no objections are raised.

In the second part are to be entered such of the rajsarkar lands the cultivation of which is objected to by the majority of the villagers.

(c) *Report regarding village disputes.*

In this report are to be entered all disputes referring to the village under attestation, with a brief note of each party's allegations and proofs, and the attestation muharrir is to record his own remarks with especial reference to the last settlement papers.

(d) *Report on rajsarkar lands uncultivated.*

Unoccupied laik and nalaik rajsarkar lands are to be shown in the following form:—

OLD.		PRESENT.			REMARKS.
Class of land.	Total area.	Class of land.	Khasra No.	Area.	
1	2	3	4	5	6

(e) *Report on lakhiraj, tonki and jagir lands.*

For the preparation of this report instructions are given in paragraph 6 below.

(f) *Report on lands held by mortgagees and under-tenants.*

This report is to be prepared in accordance with instructions given in paragraph 7 below.

(g) *Budders.*

These are to be prepared for all corrections in the survey record.

6. For the attestation of the rent-free and other tenures and for the subsequent preparation of report (a) the following instructions are given:—

(a) It should be determined with the help of the old *bhownria* (measurement papers) if any rent-free or tonki lands have been mixed up or exchanged with the riayati lands; any such cases coming to notice are to be recorded and separated by fractional numbers, if necessary.

(b) Enquiries are to be made to ascertain how long and under what rights the present tenure-holders have been in possession, and how have they acquired them, whether by inheritance, purchase, or other means.

(c) A comparative statement is to be prepared for each tenure-holder, showing the *bhownria* numbers and areas of the last settlement, and the khasra numbers and the areas of the present settlement.

7. For the attestation of lands held by mortgagees and under-tenants, the following instructions are laid down:—

(a) The khasra entries referring to lands held by mortgagees and under-tenants are to be explained to them in the presence of the superior tenants, and the amount of rent paid or the share of produce given, and the length of time for which the lands have been held by the under-tenants, are to be ascertained and recorded.

(b) All disputes and objections referring to under-tenants are to be separately reported.

8. All informations regarding khamar lands and service-tenures as may be gathered by enquiries in the locality are to be embodied in the report.

9. The muharrirs are to report two days before they expect to be able to finish the work of their respective villages, in order that dates for the Settlement Officer's visit to each may be fixed and notified.

10. When a village has been finally attested and the prescribed reports written, an acknowledgment is to be taken from the tenants that they have understood all the entries in the records concerning them. This acknowledgment is to be filed with the reports.

* These instructions are necessarily prolix, but as they were intended for not a very intelligent class of muharrirs, they could not have been otherwise.

206. From the instructions above, it will be seen that during attestation, PART III.

Some original work in course of attestation.

besides attestation proper, some original work has been done: *rajsarkar* lands have been properly classified; the objections raised to the unauthorized cultivation of common lands, recorded as *rajsarkar* at the last settlement and entered in the khasra against the name of the cultivating raiyats, have been duly inquired into and settled; the lands included in the rent-free and other tenures have been identified with the last settlement papers; detailed enquiries have been made regarding lands held by mortgagees and under-tenants, and enquiries have also been made concerning khamar lands and service-tenures.

207. Separate reports were prepared dealing with the different subjects, and this was found necessary in order to economize my time. Of the six reports which the attestation muharrirs were required to prepare, those referring to disputes and objections to the cultivated *rajsarkar* lands (reports b and c) were most important from attestation point of view, and needed more careful attention of the Settlement Officer than the others; but orders have been passed on all the reports, and these orders have been consecutively numbered for each village in order that, in correcting the survey records, the number of orders might be noted as authority against each correction. The total number of orders passed during attestation for the whole estate is 40,861.

Disposal of disputes and objections and orders numbered for subsequent correction of records.

Of these, 22,756 refer to admitted errors;

3,906 refer to the objections raised to unauthorized cultivation of *rajsarkar* lands;

2,707 refer to *bond fide* disputes, including those in the survey dispute lists, raised in petitions presented to Mr. Dutta and myself and verbally raised during attestation;

3,268 refer to the transfer of uncultivated *rajsarkar* lands from one class to another;

6,561 refer to the resumption of excess areas found in the possession of rent-free and tonki tenure-holders after allowance for chain measurement; and

1,664 refer to the disputes regarding lands held by the mortgagees and under-tenants.

208. There were, as shown above, 2,707 *bond fide* disputes which were disposed of during attestation. Against my decisions, which were given as landlord, some 400 petitions of objections were presented to the Collector, of which about 100 were sent to me for report and the rest for disposal. In only two instances were my decisions upset. One of them referred to a fraudulent transfer of a tank effected at the last settlement, and I had restored it to the rightful person; but the Collector held that the matter was *res judicata*, and the record of the last settlement was followed. The other instance referred to an agreement,* the execution of which was admitted before me but denied before the Collector, and this denial was accepted. I take this opportunity of expressing my sense of obligation to the Collector, Mr. Stevenson, for treating me all through the settlement operations with every confidence.

Appeals against Settlement Officer's orders.

CHAPTER VI.

RATES AND ALLOWANCE FOR CHAIN MEASUREMENT.

209. On my first proposals for the settlement of this estate, referred to in chapter I of this Part, the orders regarding the rates and allowance for close measurement were as follows:—

Orders on the question of rates and allowance for chain measurement.

"In ascertaining what is excess land, an allowance must be made for difference resulting from the system of measurement and not from new land having been occupied."

(Mr. Finucane's remarks, page 3 of printed copy of first proposals.)

* This agreement has since, however, been ordered to be registered by the District Registrar (Collector of Cuttack) under section 78 of the Registration Act, and so my order accepting the agreement has been restored.

PART III.
CHAP. VI.

"The existing rates are high and ought not, I think, to be enhanced. The rates proposed by the Manager appear to be reasonable, but in applying them it should be remembered that at least 20 per cent. is to be allowed for difference in areas resulting from close measurements of the Survey Department as compared with the rough system of measurement by the pole."

(Mr. Finucane's remarks, page 4 of printed copy of first proposals.)

*"It is desirable to have as few rates as practicable consistently with fair assessment
* * * * * The existing number of rates should be reduced."*

(Board's orders recorded in the last column of the printed copy of first proposals, page 2.)

"The Board agree that the existing rates are high and they should not be enhanced unless it is hereafter found necessary to make a moderate enhancement, because the addition to the total rental due to assessment of excess lands is not sufficient to admit of the carrying out on a proper scale of works of improvement necessary for the protection of the tenants and the extension of cultivation. The rates proposed by the Manager must be examined by the Settlement Officer with great care, and their effect on the current rent demand tested after the lands of some villages have been classified. If they cause an enhancement of rental over the same area, it seems desirable that modifications should be made. Any increase in the present rental of the estate should be looked for in the increased area under cultivation and not on the enhancement of the rents of lands which were under cultivation when the last settlement was concluded. It seems probable that a sufficient increase will be obtained from this source so as to render unnecessary any enhancement of rates. A further report should, however, be submitted as soon as the requisite information is available, showing the rates finally recommended by the Settlement Officer, the excess cultivated area found on survey, and the increase of rental likely to be obtained by the settlement."

(Board's orders recorded in the last column of the printed copy of my first proposals, pages 4 and 5.)

210. The report called for in the orders quoted last was submitted in Mr. Datta's No. 105, dated the 12th June 1890, in which he recommended, with my concurrence, an allowance of 16½ per cent. for close measurement, and discussed the question of rates. The allowance for close measurement was fixed with regard to the results of the survey in the few villages of the headquarters subdivision, the records of which were, by that time, received in the Settlement office. This allowance has since been found to be excessive for two subdivisions and insufficient for one. On the whole, however, the allowance made for the estate has been fair. The different portions of the estate, it appears, were measured at the last settlement with varying degree of strictness, and it would have been impossible to adjust this allowance to suit the condition of each village or locality; but the hardships caused by the adoption of a uniform rate of allowance for chain measurement has, as far as possible, been removed, as will be explained when treating the subject of assessment.

211. Mr. Datta in his rate report proposed, in a general way, the maintenance of the existing rates, the number of which, however, he proposed to reduce. The rates proposed by him were, however, not specified in the rate report, and the omission was strange. This rate report Mr. Finucane considered insufficient, and he wanted a fuller report dealing with a large number of villages. In writing to the Commissioner he remarked—

"The Settlement Officer has taken only four small villages, and on the facts relating to them entered into elaborate disquisitions on the question of rates to be adopted. It appears to me that it is not possible for the Board to pass any general orders on such a meagre statement of facts. The Board have already laid down the general principles on which the settlement should be made, and have asked for report to be based on an examination of the facts of a large number of villages on the actual rates to be applied. What the Settlement Officer should do is to ascertain and report what will be the effect on the present gross rentals of the application of his proposed rates after deducting 16½ per cent. for close measurement."

212. In accordance with the above remarks Mr. Datta submitted two reports, one in his No. 20, dated the 3rd February 1891, and another in his No. 50, dated the 16th April 1891, based on the facts of 29 and 100 villages, respectively. For these 129 villages an increase in the rental of 14.76 per cent. was

N.B.—All orders and instructions received regarding this settlement have been printed in italics for facility of reference.

shown with little or no increase of area. This increase, which was obtained by manipulation of classification, was disapproved of by the Board who, in paragraph 4 of their No. 699A., dated the 25th June 1891, observed:—

"Under all the circumstances of the case, the Board are not prepared at present to approve of the Settlement Officer's proceedings in respect of the 129 villages reported on by him, and they must await a further report after all the villages of the estate have been dealt with on the same principles as explained in paragraph 6 of the Director's No. 703T.A., dated the 25th May 1891. Greater caution should, however, be used in raising lands from one class to another."

"It has not been the object of the Court of Wards to press for heavy enhancement in the estates which have been brought under settlement. A moderate addition to the rental and a moderate return on the expenditure incurred on the operations have been deemed sufficient, and the same results may be aimed at in Kanika."

213. These orders were subsequently explained by Mr. Finucane in his

Further instructions given for inspection notes, dated the 16th July 1891. He explained:—

"That a large enhancement in the rental of these estates is not desired, but only a moderate addition to the rental on the ground of extension of cultivation. That the multiplicity of rates which are now said to prevail should be reduced, and lands should be assessed so far as possible according to class of soil at the rate which is generally paid for land for the class, after allowance of one-sixth for close measurement."

"The rates should be applied to areas of holdings and should, according to the Board's orders, operate in reducing rents of individual holdings, as well as in increasing them where the new area is more than one-sixth less than the old area. Fractions of an anna should be struck out of the rates, and in fixing the total rental for each holding, fractions of a rupee or less than four annas may be omitted."

These instructions were approved in the Board's No. 804A., dated the 12th August 1891.

214. In accordance with the above instructions I prepared and submitted

Fresh rate report submitted by me.

with this office No. 116, dated the 9th October 1891, rate statements for 524 out of 636 villages, showing for each village the existing and the proposed rates

and the effect of their application in the following form:—

Serial No.	Survey No.	Name of village.	AUL (1ST CLASS).						DOAM (2ND CLASS).						SOAM (3RD CLASS).						TOTAL.				EFFECT.			
			OLD.			PRESENT.			OLD.			PRESENT.			OLD.			PRESENT.			OLD.		PRE-SENT.		IN-CREASE.		DECREASE.	
			Area.	Rate.	Rental.	Area.	Rate.	Rental.	Area.	Rate.	Rental.	Area.	Rate.	Rental.	Area.	Rate.	Rental.	Area.	Rate.	Rental.	Area.	Rental.	Area.	Rental.	Area.	Rental.	Area.	Rental.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29

With the rate statements were submitted some explanatory remarks, in which it was shown that, besides rice lands included in the rate statements, there were the following descriptions of land:—

1. Homestead rent-free;
2. Homestead assessed (including harnasool or garden lands);
3. Several tenures at fixed rents;
4. Several tenures rent-free;
5. Several tenures resumed but assessed at rates slightly lower than those for raiyati lands of the same class; and
6. Service-tenures consisting of some rent free and some at fixed rent.

Excepting for Nos. 2 and 5, no rates were required to be proposed. For No. 2, i.e., homestead lands, the existing rates were very many as shown in the first printed proposals, pages 4 to 7 and 11 to 14, and in lieu of them three rates were proposed, viz., 3-2, 2-4 and 1-9; and for the resumed lands, it was stated that they might, at this settlement, be treated as raiyati lands and accordingly.

PART III.
CHAP. VI.

As regards the effect of the application of the proposed rates to the survey areas for raiyati lands, it was shown that an increase of some Rs. 10,500 would be obtained, the excess area discovered being 8,464 acres. The proposed rates, which were based on the survey areas, were raised or lowered according as the survey classification was lower or higher than the old, and the average rate for each village was kept as near the existing average as possible. For some villages, however, rates were raised for reasons stated in the remarks.

215. The mother and guardian of the minor Raja, however, having objected to the proposed rates, as being unfair to the proprietor, the Board, with their No. 36A., dated 11th January 1892, returned my rate statements for revision, observing that "a perusal of the rates proposed showed a tendency to strain every point in favour of the cultivator," and passed some fresh and repeated some previous orders regarding the adjustment of rates and rents, which in brief are quoted below:—

My rate report returned for revision with fresh orders.

"Increase of rental should be mainly but not exclusively looked for in the increased area under cultivation."

"A large enhancement should not be looked for, and in general existing rates should be maintained."

"No reduction of rates will in any case be given except when the Settlement Officer can state and support his opinion with sufficient reasons that existing rate has been found by him to be unfair or oppressive."

"Whenever there is variation it must, unless distinct unfairness of rent can be shown, be in the direction of enhancement."

"While the maintenance of existing rates and rents is an object, legitimate enhancement whenever the rate is found to be too low is also an object, while reduction is to be regarded as altogether out of the question except on clear grounds such as would satisfy a court under the Tenancy Act."

216. As directed in the above instructions, the rates of a few villages were slightly raised, and for the others it was shown in this office No. 37, dated 14th March 1892, that the rates proposed were substantially in accord with the Board's orders, and they were sanctioned in the Board's No. 630A., dated the 26th May 1892. For 55 villages, out of those 524, some revision of rates was, during the course of subsequent assessment, found necessary, and the revised rates for them, and the fresh rates for the remaining 113 villages, have subsequently been sanctioned in the Board's No. 880A., dated the 29th May 1894.

Revised rate reports submitted and rates proposed for each individual village eventually sanctioned.

217. To provide against a general reduction of existing rents by the application of sanctioned rates in villages in which such reduction was not justified, the Board, in their No. 824A., dated the 18th June 1893, approved of the following rule:—

A saving rule to provide against general reduction of existing rents.

"The Settlement Officer should simply keep existing rents and not strike the arithmetical rent which would result from application of the sanctioned rates to existing areas after making the sanctioned allowance of 16½ per cent. for close measurement."

218. The standard of measurement adopted in the settlement of 1865-71 and in the revision of settlement in 1880-82, was a *mān* of 22 *dasti padika* or pole (measuring 9 feet 6 inches) equivalent to 36,100 square feet, and the standard of measurement, at the present survey, has been an acre of 24 *dasti padika* or pole (measuring 10 feet 5 inches) equivalent to 43,560 square feet.

The difference in the two standards is 16½ per cent. of an acre, and the sanctioned allowance for chain measurement, as shown in paragraph 210 above, is also 16½ per cent. of an acre, and a *mān* of 22 *dasti pole* is thus equal to an acre of 24 *dasti pole*, with an allowance of 16½ of an acre for close measurement. The old areas expressed in *māns* are, therefore, after making allowance for chain measurement, expressed by the same number of acres. This is best explained by an illustration. Suppose the area of a certain plot of land is 5 acres, its area in *māns*, according to the 22 *dasti padika*, would be 6 *māns* and in acres of 24 *dasti*, after making allowance of one-sixth of an acre, would be—

$$6 - (\frac{1}{6} \text{ of } 6) = 5 \text{ acres.}$$

But 5 acres is exactly equal to 6 *mdas* and so 6 *mdas*, are equal to 6 acres less by one-sixth the amount of the allowance for close measurement or—

PART III.
CHAP. VI.

6 *mdas* = 6 acres—(16½ per cent. or ⅙ of 6 acres) = 5 acres = 6 *mdas*.

The difference between the old and the present standards being just the same as the amount of the difference resulting from the different systems of measurement adopted at the present and the previous settlements, the sanctioned allowance for the latter difference is made by simply reading the old areas in *mdas* as so many acres.

This simple method of making the allowance has saved all unnecessary calculations: the old areas in *mdas*, after allowance in the present areas, are converted into acres and the rates, per *mda* after allowance, are made applicable to acres.

For purposes of comparing the old and the new areas, the old areas in *mdas* are converted into acres, when an allowance of 16½ per cent. for close measurement is made. By reading the areas, in *mdas*, of the previous settlements as so many acres, the sanctioned allowance is uniformly made all over the estate, and all calculations have been avoided.

219. The rice lands in the estate constitute 98 per cent. of the total cropped area. The old rates for them were some 135, and they have now been reduced to 21, with fractions of an anna struck out therefrom, as instructed in the orders quoted above. The present sanctioned rates and the old rates are shown below:—

New rates for rice lands.

Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
3 8 0	2 8 0	2 2 0	1 12 0	1 8 0	1 2 0	0 12 0
3 2 0	2 6 0	2 0 0	1 10 0	1 6 0	1 0 0	0 10 0
3 0 0	2 4 0	1 14 0	1 9 0	1 4 0	0 14 0	0 8 0

Old rents for rice lands.

Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
6 4 0	2 0 0	1 7 9	1 1 4	0 11 11
4 11 0	1 15 9	1 7 2	1 1 3	0 11 5
3 6 2	1 15 5	1 7 0	1 1 2	0 11 4
3 4 1	1 15 3	1 6 11	1 1 0	0 11 3
3 3 7	1 15 0	1 6 6	1 0 10	0 11 0
3 2 9	1 14 7	1 6 4	1 0 8	0 10 11
3 2 0	1 14 3	1 6 3	1 0 6	0 10 9
3 0 0	1 14 0	1 6 0	1 0 4	0 10 5
2 14 0	1 13 11	1 5 10	1 0 0	0 10 0
2 13 10	1 13 3	1 5 8	0 15 9	0 9 6
2 13 3	1 13 2	1 5 6	0 15 7	0 9 0
2 12 3	1 12 9	1 5 3	0 15 3	0 8 7
2 11 9	1 12 0	1 5 0	0 15 1	0 8 4
2 9 8	1 11 9	1 4 10	0 15 0	0 8 0
2 9 6	1 11 6	1 4 2	0 14 9	0 7 6
2 8 0	1 11 3	1 4 1	0 14 7	0 7 4
2 7 8	1 11 2	1 4 0	0 14 2	0 7 1
2 7 7	1 11 1	1 3 9	0 14 0	0 7 0
2 5 6	1 10 7	1 3 6	0 13 11	0 6 10
2 4 3	1 10 3	1 3 4	0 13 9	0 6 7
2 4 0	1 10 0	1 3 0	0 13 8	0 6 3
2 3 5	1 9 0	1 2 11	0 13 6	0 5 2
2 3 0	1 8 9	1 2 9	0 13 2	0 5 0
2 1 9	1 8 4	1 2 3	0 13 0	0 4 2
2 1 6	1 8 3	1 2 0	0 12 9	0 4 0
2 1 4	1 8 0	1 1 10	0 12 6	0 3 4
2 1 0	1 7 11	1 1 6	0 12 0	0 2 1

The first three rates have been applied to one or two villages only, and none of them have been applied rigidly or mechanically, as will be explained when discussing the subject of assessment.

220. The rates at present prevailing in the adjoining estates for rice lands similar to those in this estate, could not be ascertained, as the people in the former were unwilling to let us know them for fear of their being used against them in the approaching Orissa settlement. Those prevailing

Present rates compared with those found prevailing in the adjoining Mogulbandi villages.

PART III. before 1865 were, however, ascertained and recorded in the course of the settlement of 1865-71, and they are comparatively shown with our present rates in the following statement:—

Name of Kanika village.	Present rates.	How separated.	Name of Megulbandi village.	Rates prevailing before 1865.	REMARKS.
1	2	3	4	5	6
	Rs. A. P.			Rs. A. P.	
Ganjā ... {	1 9 1 6 1 0	Opposite to and separated by an ordinary field partition and a creek dry at ebb tide.	Achutpur, hills Aul ... {	2 1 0 1 14 0 1 12 0 1 9 0 1 6 0	
Tayā ... {	1 9 1 4 1 0	Ditto {	Noongāon, pargana Kye-ma. {	2 4 0 1 15 0 1 9 0	
Gobindpur ... {	1 9 1 6 1 2	Ditto {	Jagulpur, pargana Kye-ma. {	2 4 0 1 15 0 1 9 0 1 6 0	
Burujāl ... {	1 14 1 8 1 2	Close to and separated by ordinary field partitions.	Chandanpur, pargana Kye-ma. {	2 6 2 1 8 2	
Pangoorā ... {	2 0 1 10 1 6				
Bondgarā ... {	2 4 1 14 1 6	Separated by the river Matā, Kanika village being on the inland side of the river.	Khedulpur, pargana Ankura. {	4 11 0 4 0 0 2 2 0 2 8 0 2 0 0 1 9 0 1 4 0 1 0 0	
Kantabaniā ... {	1 0 for all the 3 classes.	Separated by a narrow dry creek.	Kaligadi, pargana Ankura. {	2 0 0 1 9 0 1 0 0	
Noongāon ... {	1 4 1 0 0 14	Opposite to and separated by the river Matā, Kanika village lying on the inland side of the river.	Kalidaspur, pargana Bho-ra. {	2 2 0 1 12 0 1 9 0 1 4 0 1 0 0	
Kandragaria ... {	1 6 1 0 0 12				
Anantapur ... {	1 6 1 2 0 14	Ditto {	Bhagbanpur, pargana Kye-ma. {	4 11 0 4 0 0 2 2 0 2 8 0 2 0 0 1 9 0 1 4 0 1 0 0	
Bālpāl ... {	2 6 1 10 1 6	Opposite to and separated by the river Matā, Kanika village lying on the inland side of the river.	Karnajaria, pargana Ankura. {	4 11 0 4 0 0 2 2 0 2 8 0 2 0 0 1 9 0 1 0 0	
Kankaradarā ... {	1 2 0 14 0 12	Opposite to and separated by a creek.	Jhinkiria, pargana Bho-ra. {	4 11 0 2 2 0 2 8 0 2 0 0 1 9 0 1 4 0 1 0 0	
Tubhl ... {	1 2 0 14 12				
Anugrahapur ... {	1 14 1 10 1 4	Ditto {	Ghattapur, pargana Bayang. {	2 8 0 2 2 0 1 4 0 1 0 0	
Talabandh ... {	2 4 1 12 1 4				
Kharijan ... {	1 10 1 6 1 4	Close to and separated by ordinary field partition.			
Bampur ... {	1 14 1 6 1 0	Ditto {	Baramsinhapur and Baramsinhapur, pargana Bayang. {	2 2 0 2 8 0 1 9 0 1 4 0 1 0 0	
Chasakhand ... {	2 2 1 10 1 2				
Matto ... {	1 10 1 2 0 12	Close to and separated by waste land.	Madampur, pargana Utkala. {	4 11 0 2 2 0 2 8 0 1 9 0 1 4 0 1 0 0	
Bandhpura ... {	1 6 1 4 1 0				
Borapāl ... {	1 6 1 2 0 14	Close to and separated by ordinary field partition.	Turbil, pargana Utkala ... {	2 2 0 1 9 0 1 4 0 1 0 0	
			Kajasthanth, pargana Utkala. {	2 2 0 1 9 0 1 4 0 1 0 0	

From the above statement it is evident that the Kanika rates are lower than those which were found prevailing in the adjoining estates 25 years before. In point of fertility the lands of this estate are not inferior to those in the other estates. At the present settlement the estate has thus, practically, taken no advantage of the rise in prices, the increased facilities of communication, and the general development of the province.

221. The following statements show the total area and rental and the average rate of rent for *thani* and *pahi* holdings in the estate for the past four settlements and according to Raja Benayak Bhanj's papers:—

For *Thani*.

	Area.	Rental.	Average rate per <i>man</i> or per acre.	REMARKS.
1	2	3	4	5
According to papers filed by Raja Benayak Bhanj for 1834-43 ...	8,983-03*	Rs. 17,551 3 0	Rs. 1 15 1	
Settlement of 1843-45 ...	19,607-01*	22,083 13 4	1 2 1	
" " 1865-71 ...	53,572-08*	67,293 3 4	1 4 1	
" " 1893-94 ...	63,000-11	77,683 8 0	1 3 8	

For *Pahi*.

	Area.	Rental.	Average rate per <i>man</i> or per acre.	REMARKS.
1	2	3	4	5
According to papers filed by Raja Benayak Bhanj for 1834-43 ...	5,198-45*	Rs. 7,929 3 4	Rs. 1 6 2	
Settlement of 1843-45 ...	13,539-29*	15,289 5 0	1 2 1	
" " 1865-71 ...	21,385-49*	25,362 9 8	1 3 0	
" " 1893-94 ...	44,717-70	49,522 2 0	1 1 8	

* These areas in *mdms* have been converted into acres by making allowance for close measurement.

222. The area of homestead lands in the estate is 3,602-06 acres, of which 1,860-45 acres are occupied as rent-free by *thani* raiyats and their customary servants and others, and the balance, viz. 1,741-61 acres, have been assessed. As shown in the first printed proposals, there were formerly some 62 rates which have this time been reduced to three, viz.:—

Rs. A. P.
3 2 0

Rs. A. P.
2 4 0

Rs. A. P.
1 9 0

and they have been applied so as to maintain the old rents as far as possible.

In only one village, Gangadharpurpatna, Muka Ghanteswar, Elakah Panchmuka, containing only homestead land, a higher rate of Rs. 6-4 per acre has been applied. This village is inhabited by the trading castes, who have always paid ground rent at high rates. At the last settlement some land, which was used for growing betel leaves, was assessed at Rs. 18-12, and the balance at rates, Rs. 6-4, Rs. 4-11 and Rs. 3-2. The village has this time been assessed at rates, Rs. 6-4 and Rs. 3-2, and the old rents have been maintained except for lands which were formerly growing betel, but are now used as ordinary homestead, and these having been assessed as homestead, there has been some reduction of rent.

ASSESSMENT AND SETTLEMENT.

223. I took charge of the settlement from the 8rd July 1891 and submitted my rate report by the 9th October following, from which time attestation was commenced. For recording fair rents form of assessment terij devised, and reasons for doing so. Sanction to the rates proposed not having been received till towards the end of June 1892, no assessment could be done till then; but in the meantime it was thought necessary to prepare the ground for subsequent assessment, and for this object the following especial form of assessment terij was devised and got printed:—

[illegible]

The Khatians are very bulky, and they could not be constantly handled without being hopelessly damaged. Besides, I needed a simple form which could show, at a glance, all the necessary particulars of a holding to enable me to record rents, which I wished to do with due regard to the classification of soil, old and new, and the existing rents. Under an amicable settlement and with a shifting tenantry, the entries for each khatian could not be finally settled until the settlement was concluded, and it was expected that changes would take place after attestation which it would be desirable to incorporate in the records. I also felt that it would be well to confine, during the camping season, to field work, leaving work, which could be done in office, to be done at a subsequent stage. This explanation will, it is hoped, explain the reasons which induced me to adopt a special form for purposes of assessment instead of using the unwieldy khatian volumes.

224. The assessment terijes were filled up by the attestation muharrirs: columns 1 and 2 as soon as they took up the attestation, and the other columns after the villages were finally attested by the Settlement Officer. For preparing this paper instructions were given in writing to each muharrir, and a translation of them is given below:—

1. After the final attestation and the disposal of all the village disputes and objections, all *budders* are to be noted in column 17 of the *terij*. These entries are to be added to, or deducted from, the areas shown in the *khatians*, and the correct areas thus obtained are to be entered, class by class, in the area columns 3 to 16 of the said *terij*. The additions and deductions are to be shown thus:—

+ to denote addition and — to denote deduction. For example,—

+ 29 A073 (2) would mean that the khaara No. 29, the area of which is A073 and which is recorded as second class, is to be added to this holding.

— 20 A0-80 (1) would mean that the khazra No. 20, containing A0-80 of first class, is to be deducted from this holding.

2. According to the existing custom *thami* or resident raiyats are allowed homestead land rent-free at the rate of one-sixteenth of the rice land held by them in the village, and in ascertaining the area of this allowance, the muharrirs are to exclude homestead land held by *shikmi* raiyats which will be shown in column 7 instead of column 11. PART III.
CHAP. VII.

3. If the area in the possession of any tenure-holder is now less than at the last settlement, the total area is to be proportionately entered under the different classes of tenures he may hold, e.g. :—

		Old.	New.
Rent-free	...	A5.40	A4.86
Bajyatti	...	1.60	1.44
Total	...	7 00	6.30

4. The existing *jama bandi* filed by the mustagirs are to be compared with the *bhians* (assessment papers) of the last settlement, and any discrepancy discovered must be reconciled before they are entered in the columns for old area and rental.

5. After all the entries have been made excepting in the columns for new rents, the figures of each column are to be totalled and the totals compared with the figures in the *Sadar terij* prepared for rate statements. Any discrepancy noticed must be reconciled.

6. After finishing the *terij* of a village, attestation muharrir will sign its each page, and note the number of corrections and *budders* in it verifying the same.

For about 500 villages the assessment *terij*s were prepared and got ready during attestation from October 1891 to June 1892, when sanction to the proposed rates was received; and on the receipt of this sanction, arithmetical rents were calculated and entered in the appropriate *terij* columns. Similar *jama bandi* *terij*s for the remaining villages were subsequently prepared during the course of the next field season, i.e., from October 1892 to June 1893.

225. The work of recording fair rents and of taking the tenants' signature in the khatians was commenced from October 1892 and finished by August 1893. During this period, fair rents for 30,980 holdings were recorded and the signature of 28,151 tenants taken. The other tenants being unavoidably absent at the time, their signatures were not obtained. About 90.8 per cent. of the tenants having accepted the fair rents recorded, it was not considered very necessary to make any fresh attempt to get the remaining tenants (of whom 1,500 are rent-free and other tenure-holders) to attend and sign. As each tenant signed the khatian, he was given a ticket showing his total area and rent.

226. The principles on which fair rents were to be recorded were duly sanctioned by the Board, and they have been discussed in Chapter VI of this Part; but their application in detail had necessarily to be left to the Settlement Officer, and how has this important work been discharged by me has been fully explained in this office No. 80, dated the 23rd September 1893, in reference to which the Director of Land Records, Mr. Macpherson, in his No. 4488., dated the 2nd February 1894, was pleased to record the following remarks:—

"4. Dealing first with the Settlement Officer's report No. 80, dated 23rd September 1893, which relates to the assessments of the 524 villages for which rates have been approved by the Board, I have to state that the Settlement Officer's application of the Board's orders as explained by him appears to me to be generally intelligent and proper, and that it is particularly satisfactory that the rent of each individual tenant has been considered by the Settlement Officer and entered in the *terij* with his own hand. It is necessary that a discretion should be left to a Settlement Officer in application of rates, and specially to intervene to prevent hardship to individual tenants. The rules set forth by the Settlement Officer in his letter No. 80, dated 23rd September, as those which have guided him in dealing with cases of increase or decrease of area of holdings, and specially the rules which explain how he has raised or lowered rents by fractions of four annas, have an appearance of complexity. It will be remembered, however, that the Settlement Officer has been fixing new rents for thousands of tenants according to a reclassification of the lands. That reclassification was intended to cause as little change as possible as regards old lands, but when applied to areas of a recent survey, has inevitably resulted in new rents. It was necessary, therefore, to formulate clear rules for adoption or rejection of the new or arithmetical rent and for the allowances to be made. Elaboration of rule in such cases often results in simplicity of work."

At the present settlement, the system of survey, the standard of measurement, the rates and the classification of soil, are all different from those of the previous

PART III. settlements, and the application of the sanctioned rates to the survey areas
CHAP. VII. necessarily resulted, in very many cases, in new arithmetical rents, substantially more or less than the existing rents, and in such cases some had to be lowered and some raised as seemed just and proper with regard to the circumstances of each individual case. Not wishing, however, to do this arbitrarily, eight clear rules, as explained in my letter No. 80, dated the 23rd September 1893, were adopted. These rules are quoted at this place, and before doing so, it seems desirable to explain what is meant by:—

- | | |
|-----------------------|---------------|
| 1. Arithmetical rent. | 3. Old rent. |
| 2. Theoretical rent. | 4. Fair rent. |

By *arithmetical rent* is meant the sum of the products of the area under each class of a holding multiplied by its respective rate;

By *theoretical rent*, the product of the multiplication of the entire area of a holding and the average rate for the village;

(Average rate for each village has been given in columns 8 and 9 of the statements submitted with this office No. 37, dated the 1st March 1892.)

By *old rent*, the existing rent paid for the holding; and

By *fair rent*, the amount recorded by me at this settlement for the holding.

The rules referred to above are—

I. When the new and the old areas are the same, or nearly the same, and the arithmetical rent and old rent are the same, or nearly the same, arithmetical rent has been recorded as fair rent, *e.g.*—

New.		Old.		Fair rent recorded.
Area.	Rental.	Area.	Rental.	
	Rs. A.		Rs. A.	
3.50	4 8	3.40	4 8	4 8
3.79	4 12	3.90	4 8	4 12

II. When the new and old areas are the same, or nearly the same, and the arithmetical rent and the old rent are nearly equal, but the arithmetical rent contains fraction of four annas, fair rent recorded for the holding is the arithmetical rent with fraction of four annas either omitted or raised to the next four annas, according as the old area or rent is more or less than the new area or rent:—

New.		Old.		Fair rent recorded.
Area.	Rental.	Area.	Rental.	
	Rs. A.		Rs. A. P.	
(1) 6.30	7 9	6.35	7 10 6	7 12
(2) 6.42	7 15	6.39	7 10 7	7 12
(3) 6.35	7 9	6.90	7 9 10	7 8
(4) 7.18	8 1	6.94	8 5 3	8 4

III. When the old and the new areas are the same, or nearly the same, but the arithmetical rent is considerably more than the old rent, it has to be judged which of the two rents would be fair, and this is roughly done by comparing the two with theoretical rent. If arithmetical rent is equal to or less than the theoretical rent, the same has been recorded as fair rent for the holding with fraction of four annas left out, or if the arithmetical rent is substantially more than the theoretical rent due to higher survey classification, the former is reduced, but not lower than old rent, and the reduced amount recorded as fair rent, *e.g.*—

New.		Old.		Fair rent recorded.
Area.	Rental.	Area.	Rental.	
	Rs. A.		Rs. A.	
4.66	4 13	4.60	4 0	4 12

Average rate for the village being one rupee, theoretical rent for 4.66 is Rs. 4-10.

Reduced to

	Rs. A.		Rs. A.	Rs. A.
4.75	6 13	4.80	4 8	5 4

Average rate being Re. 1-2, theoretical rent for 4.75 will be Rs. 5-6.

New.		Old.		Fair rent recorded. Reduced to
Area.	Rental.	Area.	Rental.	
	Rs. A.		Rs. A.	
4.50	6 14	4.55	5 15	6 0

Average rate being Rs. 1-4, theoretical rent for 4.50 would be Rs. 5-10, but old rent being higher, reduction is limited to old rent.

In these cases where there has been no excess area found, ordinarily we are not entitled to more than the old rent, and the fair rent recorded by me is a compromise between the arithmetical rent and the old rent. The instances of such reduction have been rare, inasmuch as care was taken to adjust rates in accordance with the present survey classification when drawing up rate statements.

IV. When the old and the new areas are equal, or nearly so, but the old rental is more than the arithmetical rent, the old rent with fraction generally left out has been recorded as fair rent, *e. g.*—

New.		Old.		Fair rent recorded.
Area.	Rental.	Area.	Rental.	
	Rs. A.		Rs. A.	
4.90	4 8	4.92	5 11	5 8
4.45	3 13	4.40	5 2	5 0

V. When the new area is substantially more than the old and the arithmetical rent is proportionately or less than proportionately more than the old rent, the former with the fractional portion generally left out has been recorded as fair rent, *e. g.*—

New.		Old.		Fair rent recorded.
Area.	Rental.	Area.	Rental.	
	Rs. A.		Rs. A.	
6.40	7 11	4.50	5 13	7 8

In such cases fairness of arithmetical rents is judged by comparing them with theoretical rents, and if the former are higher than the latter, some reduction has generally been made, *e. g.*—

New.		Old.		Fair rent recorded. Reduced to
Area.	Rental.	Area.	Rental.	
	Rs. A.		Rs. A.	
6.50	7 6	5.03	5 15	6 8

Average rate being Rs. 1, theoretical rent for 6.50 is Rs. 6-8.

VI. When the new area is more than the old area, but the arithmetical rent is less than the old rent, old rent with fraction part raised to the next 4 annas has been recorded as fair rent, *e. g.*—

New.		Old.		Fair rent recorded.
Area.	Rental.	Area.	Rental.	
	Rs. A.		Rs. A.	
4.30	4 5	3.75	4 11	4 12
3.72	4 0	3.25	4 5	4 8

VII. When the new area is substantially less (*i. e.*, by more than one-sixth the amount of allowance for close measurement) than the old area, but the arithmetical rent is more than the old rent, the former has been reduced if more than theoretical rent, and the reduced amount has been recorded as fair rent, otherwise arithmetical rent has been accepted as fair rent, *e. g.*—

New.		Old.		Fair rent recorded. Reduced to
Area.	Rental.	Area.	Rental.	
	Rs. A.		Rs. A.	
4.90	5 10	6.40	4 13	5 0

Average rate being Rs. 1, theoretical rent is Rs. 4-15. Such instances, however, have been rare.

VIII. When the area is substantially less, *i. e.* by more than one-sixth than the old area, and the arithmetical rent is also substantially less than the old rent, old rental is recorded as

PART III. fair rent, provided the old rental is not more than what would be payable if the entire holding were to consist of first class, e.g.—

New.		Old.	
Area.	Ra. A.	Area.	Rental.
			Ra. A.
4.36	4 13	7.40	8 11

First class rate being Re. 1-4, the highest arithmetical rent for the holding would be Rs. 5-7, and the highest rent that can be recorded will be Rs. 5-8 or Rs. 5-4. In such cases old rents have had to be reduced, and in some instances substantially reduced.

Fair rents recorded have, as would appear from the rules, been principally based on the existing rents. If arithmetical rents were equal or nearly equal to the old rents, the former have been recorded; if disproportionately more, some reduction has generally been allowed; if disproportionately less, either old rents have been maintained or, in exceptional cases, reduced. Generally speaking in about 75 per cent. instances arithmetical rents with fractions less than 4 annas either raised or omitted, have been recorded as fair rent; in about 20 per cent. instances old rents, being more than arithmetical rents, have been accepted as fair rents, and in about 5 per cent. instances old rents have been slightly reduced.

227. The rules quoted above provided for minimizing the effects of bad survey classification as affecting individual tenants, but the reduction of rents, allowed under Rules III and VII, were not sufficient for some villages in

Fair rents recorded subsequently revised.

which the prevailing rates were high and a considerable excess area was discovered, not due to extension of cultivation, but to the insufficiency of the allowance for close measurement, and for such villages rents were further revised and reduced by the application of 3rd class rates to the nett excess areas. In some instances, especially in recently reclaimed jungle villages, rents originally recorded were more than double of the existing ones, and the enhancements were revised and limited to 100 per cent. for those above Rs. 10.

228. It was proposed in the explanatory remarks attached to the rate statements sent up with this office No. 116, dated the 9th October 1891, that, for the lands resumed in the settlement of 1865-71, the rates proposed for raiyati lands would be applied, and that the former would be amalgamated with the latter. When I came to record fair rents for the resumed lands, however, I found that the application of the raiyati rates to them would cause considerable hardship. The holders of them were tenure-holders, and they continued the same even after resumption. Besides, the application of raiyati rates to their lands resulted in very high enhancements which could not be justified, and which, if enforced, would have caused not only hardship, but excited considerable opposition. A large enhancement had already been effected—larger in fact than what the Court of Wards wanted—and I thought I might soften down the assessment of resumed lands, which I did by applying to them only 3rd class village rates. This has resulted in a reasonable enhancement which the tenure-holders readily accepted. So long as the resumed lands are held by the tenure-holders, they should, I think, be charged at somewhat lower than full raiyati rates, and when they pass into the hands of *bona fide* cultivating raiyats, they might then be settled at the rates applicable to ordinary raiyati lands.

229. During the course of settlement from October 1892 to August 1893, I was in camp at the undermentioned places to which the tenants of the neighbourhood were called, the rent entries explained to them, their signature in token of their acceptance of the recorded rents taken on the khatians, and tickets given to them showing total area and rent for each:—

Places camped at during settlement.

- | | |
|---------------------------|------------------------|
| 1. Tottapara (Panchmuka). | } Panchmuka. |
| 2. Bajrapur (Panchmuka). | |
| 3. Bausara | |
| 4. Matto | |
| 5. Subudhia | |
| 6. Panchtikri | |
| 7. Kandragaria | } Kerara and Kaladwip. |
| 8. Rajanagar | |
| 9. Penth | |
| 10. Sethhaya | } Panchmuka. |
| 11. Bhitargarh | |
| 12. Sarna | |
| 13. Bejoynagar | |

- | | |
|--|--------------|
| 14. Ghariyamal | } Chhamuka. |
| 15. Anantpur | |
| 16. Katna | |
| 17. Biraria | |
| 18. Gopalpur (Kerara); at this place storm of May 25th occurred. | |
| 19. Ganja (villages close to head-quarters settled from here). | |
| 20. Keraragarh (Kerara). | |
| 21. Kherang | } Panchmuka. |
| 22. Matto | |

After the completion of the actual settlement by August 1893, a comparative jamabandi ekpadya in the following form was prepared showing the holdings arranged in the alphabetical order:—

KANIKA WARD'S ESTATE.

COMPARATIVE JAMABANDI EKPADYA OF No.

VILLAGE.

Mukn or Zilla

Block

No.	Name of raiyat.	Residence.	New.		Old.		REMARKS.
			Area.	Rental.	Area.	Rental.	
1	2	3	4	5	6	7	8

A description of this paper, given in the Director's inspection notes of 14th and 15th April 1894, sufficiently explains its entries, and an extract from them is given below:—

"Prefixed to the ekpadya are two abstracts. The first gives all 'rajsarkar' land in one entry, all *wiskar* or rent-free land in one entry, all *thani* land under one entry, &c., &c. The second abstract gives details of *rajsarkar* under *laik* and *nalaik*, of *wiskar* under *debottar*, *brahmottar*, &c., and so on for the various classes of tenants. The ekpadya itself gives total area and rent of each holding, but not details of plots. Headings written in the middle of the page show the divisions of settled occupancy and non-occupancy raiyats. In the new rental column cess is now being entered in red ink below the rent entry. This is practically the most useful paper in the new settlement record. If plots had been given in detail against each raiyat, it would be sufficient for all purposes; but I am not sure that it was necessary to show in this form the old area and the old rent."

231. In the course of the preparation of the comparative jamabandi ekpadyas it was found very desirable to enter the amount of cesses payable for each holding and tenure so that the tenants might know the exact amounts they had to pay, and the question was therefore raised in this office No. 6, dated the 12th February 1894, in which it was pointed out that the last cess valuation of the estate having been made in 1884, it would be desirable to have a revaluation at the conclusion of the settlement, and that, as a preliminary step, the amount of cesses payable to the estate might in the meantime be recorded for each holding and tenure. This work has accordingly been done, and the amount of cesses payable has been entered in red ink below each rent entry.

At the present settlement all fractions of a rupee less than 4 annas have been eliminated, and the rent recorded is therefore 4 annas, or multiple of 4 annas, except for a few small holdings for which a 2-anna rent has been recorded, and cess calculations, which have been made under section 41 of the Cess Act, have been very easy. It was felt undesirable to charge small holdings to cesses, and, at the recommendation of the Commissioner, the Board have been pleased to sanction the exemption of holdings of annual value less than one rupee. In recording the amount of cesses payable for rent-free tenures, the Board's Rule 20, section II, page 60, Cess Manual, has been followed, and the tenures of the annual value less than Rs. 5 have not been charged to cesses. Of the miscellaneous sources of income of the estate, honey and wax and ferries, as recommended in paragraph 5 of the Collector's No. 403W., dated the 6th March 1894, and also fisheries, as provided in Board's Cess Manual, Rule 38, section II, page 64, have been exempted from payment of cesses.

PART III.
CHAP. VIII.

CHAPTER VIII.

RECORDS.

Complete records of present settlement. 232. The records of the present settlement consist of—

1. Khasras (form given in paragraph 188 above).
Attached to the above are—
 (a) Milan khasra
 (b) Statistical form
 (c) Totals of khasra pages
 (d) Statement of crops
 } Forms printed below. } Supplied by the survey party.
 2. Khatians (rent columns blank), form given in paragraph 190 above. Attached to the above are two terijes in forms printed below.
 3. Map tracings.
 4. Assessment terij, form given in paragraph 223 above.
 5. Attestation reports, no forms but a list of papers included therein given below.
 6. Comparative jamabandi ekpadya, form given in paragraph 230 above.
 7. Detailed jamabandi ekpadya, form given below.
- Prepared in Settlement office.

As the detailed jamabandi ekpadya No. 7 is to be the working rent-roll of the estate, its form, with sample entries made therein, is given below showing how it has been prepared and the different tenures classified:—

1	2	3	4	5	6	7	8	9	10
No.	Name of tenant.	Residence.	Khasra numbers.	Description of land.	Area.	Rental.	R. and P.W. cesses.	Total.	REMARKS.
	RAJBARKAR.					Rs. A. P.	Rs. A. P.	Rs. A. P.	
	Lalk ...	.....	Nos. 303 and 304 ...	Lalk saradh ...	0'15				
	Nalalk ...	.....	.. 325, 1003, 1189 and 1408.	Cattle-path ...	2'30				
			Nos. 340, 438 and 505	Creeks ...	3'65				
			.. 339 and 361 ...	Pasture ...	1'37				
			Total ...	.....	6'50				
1	LAKHTRAJ.								
	Debottar.								
1	Ganesh Thakur ...	Manikhandi	No. 301 ...	Saradh ...	0'31				
2	Jaganuath Thakur	Kerargarh ...	303 ...	Gharbari					
			Nos. 327, 328, 303, 1309 and 1410.	Saradh ...					
				Rent-free	0'06		1 2 3	1 2 3	
				Bajyatti	2'12	2 12 0	0 2 3	2 16 3	
	Brahmottar.								
1	Hari Das ...	Rajpur	Nos. 1023 and 1103 ...	Saradh ...	2'15		0 3 0	0 3 0	
2	Ram Panda ...	Chandanpur	.. 433 and 433 .. 138, 139, 313 and 416.	Gharbari					
			Rent-free ...	Saradh ...					
			Bajyatti ...	.....	17'30		1 9 6	1 9 6	
	TONKI.								
	Debottar.								
1	Grandebati	Chandanpur	No. 357 ...	Gharbari					
	Thakurani		Nos. 122, 257 and 259	Saradh ...	1'30	0 7 2	0 2 4	0 9 6	
			Tonki ...		0'63	0 12 0	0 1 3	0 13 3	
			Bajyatti ...						
2	Sarada	Kanapur	No. 259 ...	Gharbari					
	Thakurani	Pargana Jhan-	Nos. 127 and 205	Saradh ...					
		kar.	Tonki ...		2'20	0 12 2	0 3 0	0 15 11	
	Brahmottar.								
1	Narayan Miera	Rajnagar	Nos. 300, 1338 and 3031	Gharbari					
			.. 3, 16, 17, 20 and 22	Saradh ...	2'20	1 1 2	0 2 0	1 3 11	
2	Padan Panda	Rajpur	Nos. 123 and 194	Gharbari					
			.. 3, 7, 24 and 26	Saradh ...	0'54	0 3 3	0 1 0	0 4 3	
			Tonki ...		0'03	0 3 0	0 0 2	0 3 2	
	BAJYATTI.								
	Brahmottar.								
1	Narayan Miera	Haripur	Nos. 32, 94 and 100	Saradh	1'28	2 4 0	0 2 0	2 6 0	
2	Hari Das	Rajpur	No. 109	Gharbari		2'25	2 12 0	0 2 0	0 15 0
	Khaske Mod.		Nos. 2, 3, 4 and 5	Saradh					
1	Damodar Mahanti	Chandanpur	No. 35	Gharbari	1'25	2 4 0	0 2 0	2 6 0	
			Nos. 30, 32 and 33	Saradh					
	THANT.								
1	Ram Nayak	Rajpur	No. 309	Gharbari	2'20	5 4 0	0 2 0	5 6 0	
			Nos. 27, 122 and 123	Saradh					
2	Hari Sahu	Do.	No. 104	Gharbari	2'25	5 4 0	0 4 3	5 8 3	
			Nos. 253, 216 and 416	Saradh					
3	Hari Mangaraj	Do.	No. 305	Gharbari	0'25	0 12 0	0 0 0	0 12 0	

1	2	3	4	5	6	7	8	9	10
No.	Name of tenant.	Residence.	Khasra numbers.	Description of land.	Area.	Rental.	R. and P. W. cesses.	Total.	REMARKS.
	PAHI (OCCU- FANCY).						Rs. A. P.	Rs. A. P.	Rs. A. P.
1	Amam Bahu ...	Chandamper ...	Nos. 522 and 523 ...	Saradh ...	5'01	4 0 0	0 2 2	4 10 2	
2	Bijay Barik ...	Ballaona ...	No. 525 ...	Gharbari ...	1'20	2 12 0	0 2 0	2 14 0	
	PAHI (NON-OCCU- FANCY).		Nos. 1224 and 1225 ...	Saradh ...					
1	Dam Malik ...	Keravagarh ...	No. 317 ...	Saradh ...	0'20	1 0 0	0 0 0	1 0 0	
2	Pago Babera ...	Garia ...	Nos. 12 and 13 ...	Gharbari ...	1'40	2 12 0	0 1 0	2 13 0	
			.. 915 and 916 ...	Saradh ...	0				

NOTE.—The stupdras for 684 villages weigh only 40 lbs. against 4,000 lbs., the probable weight of the khattans. This paper is thus very light and handy and can be carried about in one's pocket.

FILE A.

Killah Kanika
Elakah
Muka or Zilla
Village
Tauzi No.
Survey No.

CONTENTS :

- | | |
|---|--|
| 1. Report on admitted mistakes in the survey records ... | } For these reports no forms were needed, but all orders sanctioning alterations of survey records have been numbered. |
| 2. Report on disputes (mentioned in survey dispute lists or raised by petitions) ... | |
| 3. Report on unauthorized cultivation of rajsarkar lands (unobjectionable) ... | |
| 4. Report on unauthorized cultivation of rajsarkar lands (objectionable) ... | |
| 5. Report on rent-free, tonki and bajyafiti tenures ... | } Manuscript forms were used for these. |
| 6. Statement showing rent-free, tonki and bajyafiti tenures according to last and present settlement records ... | |
| 7. Statement showing classification of rajsarkar lands. | |
| 8. Report about under-tenants and mortgagees, with a statement showing the number of them and the area held. | |
| 9. Mustagir's <i>patatalika</i> (existing rent-roll), showing the area held and rental paid by each tenant according to the last settlement ... | |

FILE C.

Killah Kanika
Elakah
Muka or Zilla
Village
Tauzi No.
Survey No.

CONTENTS :

- | | |
|---|---|
| 1. Dakhil-kharij budders and fraction lists ... | Corrections having already been made, these budders are not necessary to be kept, especially as all orders are recorded on appropriate reports. |
| 2. Budder traces ... | Maps having been corrected both here as well as in the Survey office, these traces are not now wanted. |

PART III.
CHAP. VIII.

3. Statement showing identification of khasra numbers
with old measurement bhowrian

This work was an unnecessary work, and it was done for a few villages in Mr. Datta's time, and the papers are useless.

4. Notices and proclamations

These are now not wanted, settlement having been completed.

5. Statement showing signatures obtained from tenants
after they were explained their khatian entries ...

Ditto.

6. Petitions

All objections raised by petitions having been included in the attestation reports on disputes (No. 2) and orders passed thereon, these petitions are now useless.

7. Miscellaneous papers

Including reports from attestation muharrirs asking for instructions and complaining about non-attendance of raiyats and other similar matters.

Records to be maintained. 233. Of the records mentioned above, the following alone are important:—

- | | | |
|------------------|--|---|
| 1. Khasras (1). | \| | 3. Maps (3). |
| 2. Khatians (2). | | 4. Rent-roll or detailed jamabandi
ekpadyas (7). |

The map and the detailed *ekpadya* will have to be corrected yearly and maintained properly. The latter really constitutes the working rent-roll of the estate, and it will be kept in the form as recently sanctioned and given above. The khasras might be corrected once every five years; and as the detailed *ekpadyas*, which are merely abridged khatians, will be maintained, the latter might be altogether discarded from the scheme of maintenance.

234. The correction of records, which is purely an office work, was not done until the completion of settlement. All the alterations, however, which were necessitated during the course of the operations, were shown in the appropriate columns of the assessment terij (No. 4), and the work of correcting records could be conveniently held over till the completion of all field work, and it was accordingly taken up after August 1893, and now both khasras and khatians have been duly corrected. The number of entries corrected and added in the khatians is 45,572. The total number of entries in the original records was 202,686, and they have thus been corrected to the extent of 22.5 per cent. of the total number of the entries in them.

The abstracts or the terijes attached to the survey records have not been corrected, and, except the totals of khasra pages which have been corrected, the other papers attached to the khasras are not apparently required to be corrected. The terijes for the khatians will have to be written afresh, as the correction of the original ones will take more time than the preparation of fresh ones would do; but as the khatians will probably not be maintained, it might be considered superfluous to incur the expense of preparing terijes for them. I am, however, of opinion that even if they are not to be kept corrected from time to time, it would be of value, for future references, to have their terijes prepared and bound up with them. The subject of the preparation of these subsidiary papers is now under correspondence and their preparation, in consequence, in abeyance.

235. The preparation of budder traces was carried on along with the attestation, and this work has been finished for all the villages in the estate, and budder traces and subsequently corrected map tracings have been sent in to the Survey office for the correction of the original sheets. The practice at first was to prepare two separate budder traces and area lists for each village, one copy to be filed with the attestation report, and the other to be sent to the Survey office. This practice

seemed to me to entail some unnecessary work, and I felt that if the original traces were corrected in red ink and afterwards sent to the Survey office, not only the work of preparing two separate budder traces would be avoided, but the traces themselves would be corrected—a work which would have to be done at a subsequent stage—and I wrote to the Survey Officer in charge, Orissa detachment, enquiring if he had any objection to the original traces being corrected and sent to him. He raised no objection, and the traces of 144 village maps have accordingly been corrected in red ink and sent to the Survey office. This could, of course, not be done until the completion of the settlement, as the traces could not be spared before then. There are thus 492 villages for which separate budder traces have been prepared, and for 144 villages the original traces have been corrected. The correction of the village traces for which separate budder traces have been prepared, will be gradually made, without any additional cost, by the establishment entertained for the maintenance of records, and in the meantime the separate traces have been stitched to the village maps.

The total number of corrections in the village maps amounts to 11,272.

What records are to be copied and for whom.

236. It has now been arranged that copies of records will be prepared as follows:—

(1) Khasras	...	One copy.
(2) Detailed jamabandi ekpadya or rent-roll	...	Two copies.
(3) Traces of village maps	...	Ditto.
(4) Traces of jungle blocks	...	One copy.

One copy of the rent-roll, with the traces, will be furnished to the Collectorate of Cuttack, and the other copy will be for the use of the agency which will be employed for the collection of rents. This agency will also get traces of village maps, but not of jungle blocks.

237. The khasras and the khatians which have been corrected will be

bound into volumes and deposited in the estate record-room, where the traces of village maps will also be kept arranged according to subdivisions. The assessment terijes (No. 4) were useful for recording rents, and they are of value in so far as the rents recorded therein are in my own hand. They will be bound by Mukas or Zillas and thus preserved. Attestation reports have been classified into A and C papers and catalogued, and the useless papers marked C may hereafter be destroyed. The papers marked A should for the present be preserved, and there is plenty of room for them in the estate record-room.

The comparative jamabandi ekpadyas (No. 6) are very useful, showing, as they do for each village, the area and rent for each holding and tenure, both past and present, and they will be kept bound into volumes for each Muka or Zilla separately.

The detailed jamabandi ekpadya (No. 7) constitutes the working rent-roll of the estate, and as such will be constantly in use and changed or corrected once every year.

238. Following the previous practice the Board have been pleased to sanction the issue of "hukumnamas" in the following form, to the tenants instead of furnishing them with

Hukumnamas.

• copies of khatian entries :—

Hukumnama.

To (name and address of raiyat) of village

You are hereby informed that the annual jama of the lands held by you in village Muka has been fixed at Rs. You have agreed to pay this jama and have signed the khatian. You are hereby directed to pay this jama with cesses in the following instalments, and you are warned to take printed cheque receipts for each payment you make. You are expected to render assistance in cases of emergency in repairing bunds which are constructed and maintained for your benefit:—

Instalments.

	Rent	...	Ra.
8 : mas before 15th January.	Cesses	...	"
4 " " 1st March.			
4 " " 1st May.	Total	...	"

PART III.
CHAP. IX.*Details of Holding.*

DESCRIPTION OF LAND.	Khasra number.	Quantity.	Rent.	REMARKS.
1	2	3	4	5
1. Rent-free ...				
2. Tonki ...				
3. Bajyasti ...				
4. Chandna ...				
5. Harmasool ...				
6. Thani ...				
7. Pahi occupancy ...				
8. Pahi non-occupancy.				
Total ...				

INSTRUCTIONS PRINTED ON THE BACK.

1. On the death of any recorded tenant his heir or heirs will get his or their names registered in the Manager's office. In each case of such or other transfer of land, landlord's fees at the rate of annas 2 per acre or fraction of an acre will have to be paid along with transfer (dakhil-kharaj) petition, with a minimum charge of 4 annas and maximum of Re. 1 for each registration of transfer. In cases in which registration will be refused, fees tendered will be returned.

2. No rajsarkar lands are to be cultivated or otherwise appropriated except with the written permission of the Manager previously obtained, and any one doing so will be liable to suffer penalty. No nalaik waste will be permitted to be broken up for cultivation except after personal inspection by the Manager.

3. Estate tanks in or near villages reserved as rajsarkar for the common use of the public are not to be fouled or used for irrigation.

4. When houses are built, the space to be left for roads between two rows of houses to be not less than 22 feet or two *padikas*.

5. All quick fences encroaching upon roads and paths to be trimmed at least once every year.

6. Burial grounds have been marked and reserved. No other places are to be used as such.

7. No one will keep or store farm-yard manure on or near roads in villages.

In the upper half of the "hukumnama" are shown the total area, rental and cesses for each holding, of which details and khasra numbers are given in the lower half, and on the back are printed a few general instructions for the guidance of the tenantry. These hukumnamas have all been issued to the tenants.

CHAPTER IX.

TIME OCCUPIED IN THE OPERATIONS.

239. The preliminary demarcation of boundaries was commenced by me, as Manager of the estate, in October 1888, and finished by December following, when the traverse survey camp arrived and took up and completed, by June 1889, the traverse survey of 630 villages and the topographical survey of jungle tracts of 50 square miles. The cadastral survey camp arrived in the estate in December 1889, and before the close of the field season in June 1890, completed the cadastral survey of 278 square miles and the topographical survey of jungle tracts of 99 square miles, and thus finished all field work. The records were prepared partly in survey camp office at Ganja, and partly in the Sadar office at Cuttack, and were supplied in due course.

240. The Settlement Officer, Mr. Datta, joined in February 1890, when the Time taken up by Mr. Datta as Settlement Officer.
khanapuri work was being commenced, and he supervised it as much as he could. After the Survey Officer left and the records were received by him, he commenced attestation, but by that time the season for it was not suitable,

and his progress was necessarily slow. He, however, submitted his rate report, the preparation of which took him some time, and was, for nearly 2½ months in charge as Manager, during my absence on leave from July to September 1890. As soon as the weather permitted, attestation was commenced, and some 200 villages were settled before the 14th May 1891, when he left on transfer to join his appointment as an Assistant Manager of Burdwan Raj estates.

241. I took over charge of the settlement on the 3rd July 1891, when field season was over, and so took up boundary disputes, which were pending from some time before, and prepared rate statements for 524 villages. From October following, attestation was commenced and field work was continued until June next year, soon after which I went on leave and returned in September 1892, when the attestation of the remaining villages and the final settlement of all the villages was commenced, and all field work finished before September 1893.

242. During the first season (October 1891 to June 1892) work was to some extent interfered with by the storm of the 3rd and 4th November 1891, which knocked down tents and flooded the country, and afterwards by the occurrence of cholera early in March, in which one of my muharrirs was carried off. This incident gave to the others a fright which took some little time to wear off. In the next season, serious interruption was caused by the unprecedented storm of May 1893, when nearly all the kutcha houses in the estate were damaged and the whole country was flooded with water several feet deep, so that there was one immense sheet of water, on which village sites appeared as if floating. There was water 5 or 6 feet deep in my tents, which were left standing when I took shelter in the cutcherry house across the Hansooa creek, and were shivered into shreds and afterwards knocked down and the furniture all washed away. The records were, as may be imagined, saved with the greatest difficulty. There was one house in the village close to the camp into which water had not entered, and to this house records were removed from the tents, the raiyats of the village lending willing help.

243. According to season and relative importance, work was divided and performed, and owing to the insufficiency of tent accommodation (one Swiss cottage and one Cabul pal being supplied both for office and personal use) and the difficulty of obtaining trained hands for my work (the settlement operations all over Orissa having absorbed most of them), I had, during attestation and settlement, limited number (on an average 15) of muharrirs working with me, and a good deal of record work had, in consequence, to be left over to be subsequently performed in office at head-quarters. This record work was accordingly taken up after the field work was finished in September 1893. The preparation of the comparative *jamabandi ekpadya*, referred to in paragraph 230 above, was, for collection purposes, pushed on as fast as it could be done and finished in February 1894. There was great pressure of work between November 1893 and March 1894. The Assistant Manager, who was appointed to relieve me of the routine work of management, having gone on leave and subsequently died, I had, from the 1st December 1893, to do all management and settlement work, and both were heavy at the time. I had to attend to the collection of the new and enhanced settlement rents, the disposal of various objections, the preparation of the *ekpadyas*, and to the general supervision of the work of the office establishments. The collections, which were made directly from tenants, were finished by the close of March 1894, by which time, on account of new settlement land rents alone, the sum of Rs. 1,26,112, or 92.5 per cent. of the total rental, was collected. The collections were satisfactory, and in no single instance was any objection raised to the fair rent recorded.

From 1st December 1893, as already remarked, I have not been able to devote my full attention to settlement. Having finished collection work and submitted management annual report in June last, I have written out and submitted a full report on the mustagiri system of this estate, and since July I am working at the completion report. In the preparation of this report there has been some delay, but in the course of its preparation I have not been free from interruptions. As sole Manager since 1st December 1893, I have, in ordinary course, to attend to a lot of routine work, and the occurrence of unusually heavy

PART III. floods in July and August last (the heaviest within the last 25 years) destroying
CHAP. X. standing crops almost all over the estate, threw a considerable additional
work on me. The extent of losses had to be ascertained, the most suitable
mode of affording relief to be devised, and, on receipt of sanction, takavi
advances up to Rs. 10,000 to be made. In some localities, limited gratuitous
relief has had also to be administered. All these interruptions account for the
delay in the preparation of the completion report.

244. The whole time spent over the operations might seem excessive, but
from the account of the different stages of work and
No avoidable delay at any stage. the time occupied in each, it will, however, be seen
that there has been no avoidable delay at any stage, and that work has been
pushed on as rapidly as it could possibly be done.

CHAPTER X.

INSPECTION BY OFFICERS.*

245. Mr. Finucane inspected the Manager's office on the 9th July 1891.
I was away in the mufassal at the time, but I met
Mr. Finucane's inspection. him at Chandbally on the 16th when I received
from him certain instructions. His inspection notes written then are reproduced
below:—

Ganja, July 9th, 1891.

I visited the Kanika Ward's cutcherry at Ganja to-day on my way to Outtack. The
Manager, Syed Sakhawut Hossein, was away at Rajnagar, engaged on settlement work in
connection with a boundary dispute. In his absence his head clerk, Harish Chander Bal,
showed me the office registers.

1. The total current demand of the Kanika estate is, he informs	Ra.
me	1,08,060
The arrear of last year	5,698
Total demand	1,13,758
Remission	2,028
Balance	1,11,730
The amount realized during the current year is	1,05,384
Balance due	6,396

There are 289 mustagirs on these estates. They are responsible for realization of rents
from the raiyats within their several jurisdictions, and pay the total amounts due on the due
dates of each kist without any specification of detailed payments made by the raiyats to
them. The Manager, therefore, so far as the realization of rents is concerned, has only 289
individuals to deal with.

Establishment in his office.—The Manager has the following establishment in his office:—

		Ra.
1	Head clerk on	60
1	Peahkar	40
2	Muharrirs on Ra. 20	40
1	Muharrir " 15	15
1	Bitto " 12	12
1	Ditto " 10	10
1	Record-keeper " 15	15
1	Jamadar	10
1	Poddar	15
12	Chaprais on Ra. 6	72
Total		289
Salary of Manager		420
Total		709

* The inspection notes of officers, which describe the state of things at the time they were written
do not, in all cases, correctly represent facts as now found; but it is not considered necessary to point out
discrepancies, as all correct facts and figures have been given in the body of the report.

2. The system of accounts is simplicity itself. The mustagirs chalan the sums due from them and get receipts on the chalana. A cash-book is kept showing the daily receipts and expenditure. The accounts of realization from the raiyats are not kept. If the raiyats do not pay the mustagirs, the latter are left to sue them in the Civil Courts. The mustagirs are supposed to file *jumawastikhis* at the end of the year showing the demands and realizations from the raiyats, and they are supposed to give receipts to the raiyats in the mufassal. It is the duty of the Manager to see, on the occasions of his visits to villages, that receipts are duly given by the mustagirs. The records of the last settlement made in 1881, which I have examined, show the area of each raiyat's holding, the rates of rent per *man* for different classes of land, the area under each class, and the boundaries and areas of fields, so that there ought to be no difficulty in tracing the rate of rent and the class of land under which every plot was placed at the last settlement.

3. *Present settlement records.*—The Settlement head clerk, Ragunath Proahad Das, informs me that Mr. Srinath Dutt had, before he left, settled rents of 184 villages, containing 7,190 raiyats. Of these, 4,970 raiyats signed the khatiana. There are 29,035 tenants in 577 villages, the records of which have been received from the Survey Department. The records of 55 villages have not been received. The number of raiyats on the whole estate is not known, but is probably not less than 32,098, so that Mr. Srinath Dutt has not settled the rents of one-fifth of the entire number. The new rental of the villages which he settled is Rs. 28,898, with an area of 27,410 acres, and the old Rs. 25,042. I have examined the records of Akulipara, and find that, while Mr. Srinath Dutt increased the rent where there was excess of area as compared with the previous area of the holding, he did not reduce it where the new area was less than the old. There is no record by Mr. Srinath Dutt in his own hand showing the rates fixed for each village and how they were fixed; but there is a list of villages and rates written in Uriya, which, however, is not signed, showing the new rates and the old. Mr. Sakhawat Hossein should be careful in every village to show in his own hand-writing, for every village, the existing rates and the rates settled, and the grounds for fixing the latter.

The survey records give statistics of crops, of cattle, and of the number of people in each village.

4. *July 16th.*—I met Mr. Sakhawat Hossein, the Manager. I showed him the orders passed by the Board on Mr. Srinath Dutt's rate report, and instructed him, in assessing rents in the remaining villages, to keep in mind the principles laid down by the Board—

- (1) That a large enhancement in the rental of these estates is not desired, but only a moderate addition to the rental on the ground of extension of cultivation—such as would afford a moderate return for the outlay. The outlay on survey has been Rs. 66,254 to the end of June, Rs. 7,998 for settlement to 14th May. The total area of the estate is 282,240, of which 177,920 acres were cadastrally surveyed; the rest is jungle. Mr. Sakhawat Hossein now estimates that the cost of completion of the settlement will be Rs. 14,505, which, added to the amount already expended on settlement and survey, gives a total expenditure of Rs. 89,247.

A moderate return for this outlay at 5 per cent. would be about Rs. 5,000.

- (2) The second principle to be borne in mind is that the multiplicity of rates which now are said to prevail should be reduced, and lands should be assessed, so far as possible, according to the class of soil, at the rate which is generally paid at present for land of the class, after allowance of one-sixth for close measurements. The rates should be applied to areas of holdings, and should, according to the Board's orders, operate in reducing rents of individual holdings as well as in increasing them where the new area is more than one-sixth less than the old area. Fractions of an anna should be struck out of the rates, and in fixing the total rental of each holding, fractions of a rupee or less than 4 annas may be omitted. The Settlement Officer should show in his maps the lands included in each class to which a different rate is applied.

- (3) Expenditure incurred by the estate in keeping up bunds which were necessary for enabling cultivation to be carried on, should not be taken as a ground for enhancing rents. The Board have pointed out that the cost of these bunds is the consideration which the landlord has to pay for receiving any rent in these parts.

5. Mr. Sakhawat Hossein should prepare assessment statements showing what the rates would be on these principles and the effect of the adoption of them on the existing rental. He should now push on the attestation and determination of the rental of each village on these principles, and submit as soon as practicable the report called for in the Board's No. 699A., dated 25th June.

6. The work of the Manager's office and of the Manager himself in collecting rents appears to me to be very slight. Only 289 separate individuals have to be dealt with. They are substantial people, from whom there ought to be no difficulty in realizing what is due; so that the real work of collecting ought to be as easy as it would be to collect the rents of 300 raiyats in one village. The Assistant Manager and his establishment, when not otherwise employed, should, I think, be utilized in the work of settlement. The settlement is nothing more than part of the management in this case."

PART III.
CHAP. X.

246. On the 23rd February 1893 I met Mr. Macpherson at Chandbally and discussed the settlement with him. His notes written at the time are quoted below:—

"1. Mr. Sakhawat Hossein, Manager of this estate, met me at Chandbally on the 23rd February 1893, and gave me the following account of the progress of the amicable settlement of rents which he is making. He also brought some of his records for my inspection.

2. The whole area of the estate is 441 square miles, of which 278 square miles, or 177,920 acres, have been cadastrally surveyed. The remainder of the estate is jungle, river and waste. The estate is divided into four principal subdivisions or Elakaha, viz., (1) Panchmuka in Balasore, (2) Ohhahmukha, (3) Kerara, and (4) Kaladwip,—all in Outtack. It contains 686 villages and 32,347 raiyats. Five villages have been formed out of jungle blocks during the settlement.

3. Nothing had been done down to the end of September 1892 towards the settlement of fair rents. The Board's orders of May 1892 on the subject of the rates reached the Manager in June. He then went on leave, and returned from leave on the 24th September. About 450 to 500 villages had been attested by the end of June. No attestation work was done between June and September, but some assessment work, i.e., calculation of rents according to classification of lands, was done. Mr. Sakhawat Hossein states that the Survey Department prepared the khatians in a central office during part of the operations at Ganja, and for part of the time at Outtack, not in the field. The Survey office filled up all the columns of the khatian, including the status column, except the rent column. The Survey Department sent the records to the Manager as they were got ready, viz., map, khaara, khatians, milan khaara, mot khaara, crop statement and terij, and a list of disputes.

4. At the time of the record-writing Mr. Srinath Dutt was looking after it. He was on duty as Settlement Officer for about 15 months, from February 1890, and he began the attestation. He attested and recorded and settled rents for 14 villages up to June 1890, when he submitted the first rate reports. On the first rate reports further information was called for. The rates proposed by Mr. Dutt were not accepted, and Mr. Sakhawat Hossein then drew up a new rate report. Mr. Sakhawat Hossein's proposals were substantially accepted in the Board's orders of May. Mr. Dutt attested the khatians and settled rents for about 200 villages before he left. But all those khatians and rents have come under Mr. Hossein's revision. Mr. Hossein took charge of the settlement work from July 1891. (Mr. Dutt left on 14th May 1891.)

Mr. Hossein resumed attestation work from October 1891. He did not enter either existing rents or new rents in the khatians or touch the khatians, but he entered existing rents and old and new areas in a special terij form and waited for the Board's orders as to rates. He had columns in this special terij for showing what additions to, or deductions from, the khatians should be made on account of plots omitted or wrongly inserted. The transfers necessary as entered in the terij have not yet been made in the khatians. The khatians are to be written up after the settlement is over. This terij also contains rental columns for entry of new rents against each class of land. The new rents were filled in, not at the time of attestation, but in office. They were worked out arithmetically according to rates by muharrirs paid at contract rates. But the rent finally settled has been in all cases entered in the last column of the terij by Mr. Hossein with his own hand. He has not always accepted the arithmetical rent got by his muharrirs, but has sometimes reduced it and sometimes raised it. He tells me that he does not trust the classification made by the survey amins.

5. Mr. Hossein further explains that he has written this special terij for 450 to 500 villages, but that he has settled rents for about 200 villages. In the case of the villages for which he has settled rents, he has entered in the khatians as well as in the special terij the 'rents demandable under each class' and 'the total rents demandable,' but he has not yet made the necessary additions to and transfers from the khatians on account of decisions with regard to disputes. Thus, in the case of khatian No. 25 of mauza Chalunia and against the same khatian number in the special terij, he has shown the total rent demandable as four annas; but effect has not yet been given to a decision with regard to three plots which are to be transferred from this khatian to another khatian. Mr. Hossein settled fair rents for this village in October. The signature of the raiyat interested in khatian No. 25, Boni Padhan, has been affixed to the uncorrected khatian. Mr. Hossein says that it represents acknowledgment of the correctness of the total area and rent only. The three plots have been transferred to a joint khatian for Boni Padhan and Adhikand Padhan: that khatian has been signed by Adhikand Padhan. Only the total area and new rent settled have been entered in the joint khatian. Mr. Hossein says that it is desirable to save time at settlement, and that the necessary corrections and additions will be made later.

6. At attestation time Mr. Hossein camped in every village. At settlement time he camped at convenient centres not distant more than three miles from a village under settlement. Mr. Hossein thinks it desirable to be visited for attestation. He has used the same khatians as were used by Mr. Dutt for settlement, but has taken new signatures from the tenants. At the time that a tenant's signature is taken he receives a ticket on which are entered his name, total area of his holding, and new rent settled. The ticket is written by the muharrir who takes his signature on the khatian. The ticket is not signed by any one.

7. Mr. Hossein intends to complete the khatians and to correct the khamras, to write a fair copy of the special terij (first bringing the badar entries under their proper khatian numbers), to give the mustagira copy of the clean terij, and to send a fair copy of khamra and khatians and a trace of the map to the Collectorate. He should make proposals on this subject to the Collector.

8. Mr. Hossein wishes to give the tenants hukumnamas instead of copies of their khatians. This matter was referred for the orders of the Board in my letter No. 402T.A., dated 7th February 1893, and the Board has approved the proposal in letter No. 297A., dated 23rd February 1893.

9. Under the Board's orders of May, Mr. Hossein has got approval of the rates which he had proposed for 511 villages. He proposes to ascertain fair rates for the remaining villages on the principles approved for those 511 villages; he has not fixed any limit of enhancement. I have instructed him that in all cases he may properly apply Rules 14 and 15 on page 15 of the Settlement Manual.

10. Mr. Hossein hopes to have finished his settlement by September, and to submit his final report on the settlement by March of next year. He only uses two or three muharrirs for attestation; he has altogether twelve muharrirs engaged on settlement.

11. The local measure adopted in the last settlement of the estate, which was made in 1871, was the 22 dasti padika, which gives a man equal to nearly four-fifths of an acre. The only measure shown in the papers of the present settlement is the acre, which is almost exactly equivalent to the 24 dasti padika area.

Mr. Hossein asks me when a large decrease of area is found in a village after making the sanctioned allowance of 16½ per cent. for close measurement, whether he is bound to follow the sanctioned rates where they result in a general reduction of rents. He gives an instance of a village in which the area has decreased by 50 to 100 acres under the present measurement after making the sanctioned allowance. Applying the sanctioned rates to the area ascertained by the survey, the rental settled would have been considerably less than the existing rentals. Mr. Hossein saw no necessity for such a reduction. The village boundaries are the same as in the last settlement. The lands have improved, not deteriorated. In this case he raised the sanctioned rates for second and third class sarad by two annas, and while the rents of some raiyats were even then settled below what they now pay, the total rental of the village remained practically the same. The orders appear to require some revision, and Mr. Hossein should report specially on the subject.

12. *Mutations.*—Mr. Hossein tells me that all raiyats, thani as well as pahi, in the Kanika estate are required to obtain permission before they can alienate their holdings or parts of their holdings. Raiyats do not register successions in the zamindari cutcherry (there is only one zamindari cutcherry, viz., at Ganja, for the whole estate), but may do so in the mustagira's office. In letter No. 297A., dated 23rd February 1893, the Board has sanctioned levy from tenants of a minimum fee of 4 annas and a maximum fee of one rupee for registration of mutations.

13. *The boundary dispute with the Raja of Aul.*—There is a dispute between the Kanika estate and the Raja of Aul about the bed of a tidal river. The Commissioner has held that Mr. Hossein has the power to decide it in his capacity as an Assistant Superintendent of Survey. The Raja of Aul objected on the ground that Mr. Hossein as Manager of Kanika should not decide such a dispute. Mr. Worsley, however, as Commissioner, overruled the Raja's objection. I instructed Mr. Hossein that in fulfilment of the Commissioner's order he should now decide the dispute under Part V of the Survey Act. If he cannot decide who is in possession, he should attach and make over to the Collector under section 42 of the Act.

14. Mr. Hossein thinks that the rental of the estate may probably be raised by the settlement from Rs. 1,16,000 to Rs. 1,32,000, or thereabout. He thinks if a fair settlement had been made under the Tenancy Act, at least Rs. 1,50,000 could have been got. The orders as to rates in fact prevent the estates getting the whole increase which might have been got.

15. *Khamar lands.*—Mr. Hossein has recorded about 3,000 acres of the proprietary lands which the raiyats have admitted to be proprietary lands. This does not represent the whole area of proprietary lands held by the estate previous to 1871. No attempt was made, it is said, in the settlement of 1871 to record proprietary lands.

16. The settlement khatians are to be the new jamahandi of the estate. They should be well bound up with strong cloth. First come the khatians for rajsarkar, i.e., proprietary lands and waste, then come the khatians for each tenure-holder. Care should be taken in recording the status of tenure-holders not to degrade the status of raiyats. Thus, if brahmattardars are recorded as raiyats, their tenants will be under-raiyats only. Brahmattardars, therefore, should probably be recorded as tenure-holders, and not as raiyats."

247. Mr. Stevenson inspected the Settlement office on the 30th November 1893. He went through the correspondence and the records thoroughly, and wrote out full notes of which extracts are given below, paragraph 11 having been copied in paragraph 163, Part II of this report:—

"When at Ganja to-day I made no formal inspection of the estate office inasmuch as Mr. Walsh did so last month when I was on leave. I, however, made enquiries on several

PART III. points, and especially as to settlement, a matter into which Mr. Walsh did not go. The
CHAP. X. results are noted below :—

1. *Settlement*—

"(1) There is nothing in the Manager's office which shows how the present amicable settlement now approaching completion was started. (It was a result of Board's No. 588A., of the 12th August 1886, to Government of Bengal.) The Manager, on his return from leave in December 1888, found a surveyor waiting here, and by and by came a letter desiring the Manager to give every assistance.

"The traverse party was at work in 1888-89 and the cadastral survey in 1889-90.

"(2) In the end of 1889 the Manager submitted his first proposals for settlement of rents which, with Collector's, Commissioner's, Board's and Director of Land Records and Agriculture's remarks in parallel columns have been printed. Pending arrival and ment of a Settlement Officer, rules for filling up khasras had to be framed by the and sent up for approval, and they were approved of in Collector's No. 182S., da December 1889, duly printed and acted upon.

"(3) Mr. Datta joined as Settlement Officer in February 1890, and on receipt of records from Survey office, submitted his rate report which was printed with Commissioner's, Manager's and Director's remarks (*cf.* Settlement Officer's No. 125 of the 2nd July 1890 to Collector). The Board's No. 699A., of the 25th June 1891, conveyed its observations on this, and the result was that the Manager, Mr. Hoassin, was placed in charge of settlement operations from the 3rd July 1891. Mr. Finucane came to Kanika on 9th July 1891, and gave certain instructions in his inspection note of the 16th July 1891. In a demi-official, No. 296 of the 30th July 1891, he informed the Manager that classification of soils was unnecessary, but that he should go on taking raiyats' signatures to his khatians. But as the Board in its No. 699 had desired that the rates should be approved by it (paragraph 4) before final settlement was made, the Manager did not act on this demi-official.

"(4) In October 1891 the Manager submitted his rate report (No. 116, dated 9th October 1891) to the Director direct as had been requested, and meantime began attestation, framing instructions to the amins (copy sent later to Director, Agriculture), who were supposed to attest 100 khasra numbers a day.

"(5) The Board's orders on Manager's rate report (its No. 86A., dated 11th January 1892) were received by the Manager direct from the Director of Agriculture, &c. Just as Mr. Finucane had objected to Mr. Datta's rates (*cf.* paragraph 6 of his No. 703T.A., of 25th May 1891 to Board) as too hard on the raiyats because he had dealt with a tract which showed decreased area and enhanced rates, so in this letter the Board took exception to the Manager's rates as being too frequently in the direction of reduction, and it was laid down that any change should, as a rule, be the other way and no reduction allowed except on the clearest grounds of unfairness. This letter of the Board, in my opinion, prescribed a course much more fair to the proprietor than that laid down by Mr. Finucane. But it seems to me that it did not go far enough, and that we have not safeguarded the interests of the minor as we ought. The opening up of Chandbally as a port has vastly improved the condition of the raiyats all round, and this resettlement offered us an opportunity, which now is lost for good, of giving the proprietor his equitable share in the improvement. I believe that in pargana Kyoma just across the river and adjoining the estate lands, the rates of rent for similar lands are very much higher. Enquiries made verbally just now go to show this. I have asked the Manager for a note on the subject.* I had in my No. 49S., dated the 18th April 1892, expressed my opinion as to the lowness of the rates proposed by the Manager in his rate report. But the District Officer had practically no say in the matter, the whole real control being at first with Mr. Finucane, who corresponded direct with the Settlement Officer all along.

"(6) In his No. 37 of 14th March 1892 to the Director of Agriculture, the Manager replied to Board's letter above noted, and showed clearly the changes of policy as regards the settlement. I would invite reference to it. Mr. Macpherson, Officiating Director of Agriculture, came to inspect on 23rd February 1893, and his inspection note gives an outline of the progress of the work. I find that during my absence on leave the Settlement Officer reported in detail on his resettlement proceedings in his No. 80 of the 23rd September 1893 to Collector."

As pointed reference has been made in paragraph 6 of the Collector's notes to this office No. 37, dated the 14th March 1892, extracts from it are quoted below :—

"2. The Board's instructions, as quoted in paragraph 2 of their No. 36A., were, that 'the increase of the rental should be mainly (but not exclusively) looked for in the increased area under cultivation, a large enhancement should not be effected, and in general existing rates should be maintained.' In the rate statements submitted by me an increase of rental by Rs. 10,470-7-9 has been shown, Rs. 9,742-9-5 being due to increased area under cultivation, and Rs. 727-14-4 to enhancement of rates on the whole, by 2 pies. As increase in the rental was mainly to be looked for in the increased area under cultivation, most part of it has been so obtained, and only a small portion from the only other source, viz. through enhanced rates.

* Note given in paragraph 290 above.

"3. A large enhancement the Board said was not to be effected, and what was meant by 'large enhancement' was explained by the Board in the concluding portion of paragraph 4 of their No. 699A., dated 25th June 1891, which I beg permission to quote: 'It has not been the object of the Court of Wards to press for heavy enhancements in the estates which have been brought under settlement. A moderate addition to the rental and a moderate return on the expenditure incurred on the operations have been deemed sufficient, and the same results may be aimed at in Kanika.'

"The Board thus wanted a moderate return for the outlay, and this moderate return was again explained by you in your inspection note of July 1891, with Board's approval, to be about Rs. 5,000. In the rate statements I showed a probable increase of Rs. 10,470-7-9 from 611 villages only. From the remaining 121 villages a proportionate increase is of course expected. From this it would appear that if I have exceeded the instruction, I have done so in favour of the estate and not of the cultivator.

"4. The existing rates were in general to be maintained, and this has been done, as may be gathered from the fact that the average rate for the whole estate as shown in paragraph V of the explanatory remarks has been raised by two pies in the rupee.

"5. On the subject of rates the orders of the Board passed on my first proposal were—
" * * * The rates proposed by the Manager must be examined by the Settlement Officer with great care, and their effect on the current rent demand tested after the lands of some villages have been classified. *If they cause an enhancement of the rent over the same area, it seems desirable that modifications should be made.* Any increase in the present rental of the estate should be mainly looked for in the increased area under cultivation and *not in the enhancement of rent of lands, which were under cultivation when the last settlement was concluded.* * * * I have italicised the portions to which I would beg to invite particular attention. From the orders quoted above, it would appear that the Board distinctly laid it down as a general principle that rates were to be so adjusted as to leave rents of lands which were under cultivation at the time of last settlement, unaltered as far as possible.

"6. In accordance with the above instructions, the late Settlement Officer was required to work, and he submitted reports for 129 villages in which he showed little or no increase in the area under cultivation, but 14-76 per cent. increase in rental. This increase having been obtained by manipulation of classification and rates, was not obtained in accordance with the Board's orders, and his proceedings were accordingly not sanctioned pending receipt of a further report from me. In issuing instructions the Board re-affirmed their previous orders."

248. On the 14th and the 15th April 1894, Mr. Macpherson visited this

place and inspected the office. This inspection was thorough, and the notes written out at the time have been printed and extracts therefrom are quoted below:—

"I came to Ganja chiefly to look into the new rent-roll which has been prepared for the estate in accordance with rates sanctioned by the Board and instructions given as summarised in my letter No. 4488., dated 2nd February 1894.

"2. Mr. Sakhawat Hossain, the Manager and Settlement Officer, pointed out, with reference to paragraph 7 of that letter, that I had omitted to take account of rents of resumed lands, tanki and other tenures, and harnasool (or homestead garden lands), all of which are mentioned in the explanatory remarks attached to his rate statement, dated 16th October 1891, but are not included in the rate statement which was confined to ordinary cultivated lands in the possession of thani and pahi raiyats; that is to say, the rents named are, in addition to the total sum of Rs. 1,01,203, estimated at the foot of the rate statement of 1891 as likely to result from application of the proposed rates. The actual rental recorded in the present settlement for resumed lands is Rs. 4,451, for tanki and other tenures Rs. 3,440, for harnasool lands about Rs. 10,000,—say Rs. 18,000 in all.

"The total of the new rent-roll is Rs. 1,36,292, against Rs. 1,38,895 before reported as approximately what was likely to be obtained. The apparently large increase which had alarmed me is satisfactorily explained therefore.

"3. I have next to note with reference to the enquiry made in Board's letter No. 523A, dated 20th March 1894, that the new rent-roll has actually been brought into effect. The kists are for January annas 8, March annas 4, and May annas 4. In letter No. 1266A., dated 24th October 1892, the Board sanctioned continuance of the old rents for the year 1300 Ahli, which ended in September 1893. Mr. Sakhawat Hossain saw no reason for deferring collection of the new rents, and after September 1893 accordingly collected them almost in full in the two kists of January and March 1894. I did not know that he intended to do this, but consider that he acted wisely. I stated in my letter No. 959, dated 7th March 1893, addressed to the Board, that it might be desirable, to prevent misunderstandings, that the new rents agreed on should come into effect at once. Mr. Sakhawat Hossain camped at convenient centres in January and March, called the raiyats in, and made them pay to the mustagira, who at once paid in to the Manager.

"4. In an inspection note dated 30th November 1893, the Collector, Mr. Stevenson, has emphatically stated that the rates adopted in his settlement are low, and that the raiyats have been treated with leniency even to the extent of unnecessary sacrifice of the interests of the proprietor. Mr. Sakhawat Hossain also states that the settlement rates are low as compared with those of neighbouring zamindars.

"5. With a view to understanding the methods on which Mr. Sakhawat Hossain worked in settling the new rents, and in order to see whether the enhancements made are *prima facie*

PART III. fair and equitable, I made an examination of the settlement records of Partabpur and
CHAP. X. Jonesnagar villages, Nos. 78 and 13, in the rate statement, dated 31st August 1893, for the
113 villages which was submitted to the Board with my letter dated 2nd February 1894.

Record of mauza Partabpur in Elakah Panchmukha.

"6. *Map.*—The name of the village and year of survey (1889-90) have been entered. The Revenue Survey number has not been entered in this map; but generally the Manager says has been entered on the village maps. The Revenue Survey numbers have been marked on a mujmili map, and should be entered on the 16" maps where they are wanting. The Manager tells me that the demarcation of village boundaries was done by himself according to possession. The mustagirs demarcated. He does not know whether the villages as mapped generally agree with the villages of the Revenue Survey of 1838—42; but he has seen some of the new village maps which do not agree in configuration with the old Revenue Survey maps. Badars have been neatly entered on the maps in red by trained men. For about half the villages badar tracings with areas have been sent to the Survey Department for corrections of the sheets; and payment has been made for the corrections. For about half the maps badar traces and lists have not been sent. The simplest plan will probably be to send the settlement trace and badar list, as it is to be arranged that complete second traces are to be made in the Survey office at Outtack for the purpose of estate management.

"7. *Khasra.*—The khasra of Partabpur shows 1,087 field numbers. The village has an area of 756.45 acres.

"The khasra has no title-page stating when the kharapuri was done; but every page bears the amin's signature, an Inspector's signature, and the Surveyor's signature. Mr. Pyster was the surveyor. There is a note at the end of the khasra, dated 15th October 1890, saying that it has been compared with the khatians.

"To the khasra are prefixed the mot khasra, milan khasra, and crop statement.

"The khasra was used by his muharrira, the Manager says, at the time of attestation for reference; but no correction has been made in it since it came from the Survey office.

"The Manager has not even caused to be entered in the khasra the new numbers formed at attestation time. He says that he was waiting for orders as to correction of the boundaries column. I find a field number (1098) in the khatians; so at least 11 field numbers have not been entered in the khasra for this village.

"The Manager has not made use of the milan khasra for his statistics, but has compiled statistics from the corrected terij and khatians. I would have expected that he would have used those ready to hand in the milan khasra; but he explains that he wished to give the most recent figures, including cultivation, since the year of survey.

"8. *Khatians.*—The khatians folded in the middle make up a massive volume about 13 inches by 13 inches by 2 inches thick. The form used is, with some slight changes of the crop classing, the form which was used in settlement of the Banki estate which is printed on pages 64 and 65 of the Survey Manual. (The same form was used in Kujang and in the first year of the record-writing on the temporarily-settled estates of Orissa.) The Survey Manual does not give a fair idea of the cumbrousness of the form; and it is difficult to understand how such a form can have been prescribed or tolerated.

"The khatians are prefixed by two terijes which were prepared by the Survey Department—a sadar terij and a detailed terij.

"(The whole property of 636 villages is contained in eight tauzi numbers, so there is no complication of mahals in villages.)

"The survey sadar terij shows—

			Khatian.	Fields.	Area. Acres.
Rajsarkar uncultivated	...	...	1	204	129
Rent free	...	...	6	25	29
Thani and pahi	...	...	124	834	870
Tonki	...	...	9	24	27
Total	...	...	140	1,087	756

"Then comes the survey detailed terij, giving a classification of land for rajsarkar totalled under each of the following heads:—old fallow, rivers and ponds, roads, other uncultivated, total uncultivated; new fallow, old fallow (it is not clear why this head was repeated); total culturable. Then details of lakhiraj, debottar and brahmottar. Then come all the thani and then all the pahi and then the tanki tenants. The Manager tells me that sometimes these terijes prepared by the Survey Department have been corrected, and sometimes they have not been corrected. He found it a waste of time to correct, and stopped the work.

"The Manager says that out of 20,000 field numbers, the entry in the khatians for about 50,000 numbers have been corrected or added since the time of kharapuri. This includes new cultivation, about 2,000 acres, surveyed by the Manager but not surveyed by the Survey Department. (N.B.)—There are 177,920 cultivated acres in the estate. Khatian forms have been added when necessary, but there has been no general addition of large numbers of khatian forms to this record. The Manager thinks that addition has been made of about 5 per cent. of new khatians.

"9. The khatians were filled up so far as column 9 by the surveyamins. After the records had been received from the Survey office, attestation muharrirs were sent to the villages with khasras and maps, and afterwards with the khatians also. Having explained the khasra entries which, however, they did not correct, the muharrirs wrote attestation reports.

"10. The attestation reports are filed in separate bundles for each village, and deal with a number of subjects. Then the Settlement Officer visited the village and passed orders on the attestation reports; and then settlement detailed terijes were prepared in the following form."

"The 'settlement detailed terij' was prepared in the following way. After the Settlement Officer had passed orders on the 'attestation reports,' his muharrirs filled up columns 1 and 2 and 17 of this form. Column 17 refers only to *area*. Then with reference to the entries in 17 and the khatian entries, total areas of holdings class by class were entered in area columns 3 to 16.

"After rates for 511 villages had been sanctioned by the Board in letter No. 630A., dated 26th May 1892, arithmetical rents were worked out by muharrirs employed at contract rates, and were entered in rent columns 3 to 16 of this terij.

"11. The next stage was for the Settlement Officer to go over the terij and record a rent with his own hand. He did this in English in column 17, or wherever space was available in the form.

"12. The raiyats were then called in to the place at which the Settlement Officer camped; and the rents entered in the terij were explained to each raiyat, and were there and then entered in the khatian, and the raiyat's signature was taken, and a 'ticket' showing his new area and rental were given to each tenant at this stage. The raiyats rarely objected to the rents. The Manager occasionally revised after this of his own motion always in the way of reduction. He did so in the village of Partabpur on the ground that much of the excess area was not really an extension of area, but was included in the old holdings, and that sufficient allowance had not been made for difference of measurement. He reduced the Rs. 213-6-1 of increase shown in column 28 of his rate statement, dated 31st August 1893, to Rs. 150. A new Sadar terij was then prepared for the village in the settlement terij form.

"14. I next made a more particular examination of the 'settlement detailed terij' of this village to ascertain what have been the enhancements of individual tenant's rents.

"The figures given on pages 16 and 17 of the printed rate statement, dated 31st August 1893, for Partabpur village, so far as regards thani and pahi tenants, are as follows:—

Old area	...	...	...	Mans 374-02
" rental	...	...	...	Rs. 439-11-11
New area	...	...	...	Acres 558-23
" (proposed) rental	...	...	...	Rs. 653-2

"These figures are exclusive of rent-free, chandna, bariharasool, tanki, resumed (bazyafti), and cultivation more recent than the year of survey.

"The actuals for the village after completion of settlement for thani and pahi are as follows:—

New area	...	...	...	Acres 586
" rental	...	...	...	Rs. 643

"I went through the whole of the 'settlement detailed terij' for this village and compared old and new rents. After allowing (1) for extension of holdings, (2) for transfer from one holding to another, and (3) for assessment at the lowest rate of lands settled at nominal rates at the last settlement as being then culturable waste, I find no *prima facie* excessive enhancements.

"15. I next went through the 'settlement detailed terij' of Jonesnagar. This village is No. 13 on page 14 of the rate statement, dated 31st August 1893, for the 113 villages last assessed. That statement shows for pahi lands (there are no thani tenants in this village) —

Old area	...	...	...	Mans 536-8
Rental	...	...	...	Rs. 100-12-6
New area	...	...	...	Acres 559-95
" proposed rent	...	...	...	Rs. 332-9-0

"The cause of increase in this village is that great part of it was culturable waste at the last settlement and was settled at a nominal rent of annas 3 a man. It has now been settled at rates of annas 12, annas 10, and annas 8 for cultivated land as was proposed under head X of the Settlement Officer's rate report, dated 9th October 1891, and approved in correspondence ending with the Board's orders No. 630, dated 26th May 1892.

"Saw no enhancements in this village that appeared to be excessive. Where the new deduced or arithmetical rent at close rates exceeded Rs. 10 (which was only in half-a-dozen cases), the Settlement Officer either stopped short at Rs. 10, or applied the rule in the Settlement Manual which limits an enhancement to 100 per cent.

* Form given in paragraph 223 above.

Note.—Paragraph 13 quoted under paragraph 230 of this part.

PART III.
CHAP. X.

"The actuals for the pahi tenants in Joneanagar are—

New area	...	...	...	Acres 591-36
Rent	...	...	...	Rs. 329-13

"16. In Kharijan village (No. 80 on page 19 of the rate statement, dated 31st August 1893) the new rental for thani and pahi tenants is shown in the rate statement as Rs. 632-3. The rent actually worked out and entered in terij, khatians and ekpadya is Rs. 608, and this now includes harmasool lands (say Rs. 10).

"17. In the manner stated in paragraph 15 above, and by application to excess lands of the lowest rate in villages (especially in Panchmuka circle) where the rates are high, the new assessment has been softened; and the Settlement Officer states that the actual increase obtained from the thani and pahi tenants in the 113 villages shown in his rate statement, dated 31st August, has been not Rs. 3,810 (Rs. 17,544 less Rs. 13,734), but about Rs. 2,000 only.

"So far as I can judge, I agree in the opinion expressed by Mr. Stevenson (who also examined some of the detailed terijes and enquired as to rates of *zamindaris*) that the enhancements are on the whole moderate, and that cases of individual tenants have been carefully considered."

"I see no reason to doubt the workability of the new rent-roll.

"18. *Mustagirs*.—The Manager mentioned this subject to me, but I had no time to consider it properly. He will deal fully with it in his completion report.

"19. *Maintenance of records*.—On this subject the Manager gave me a note (which he had prepared in anticipation of Mr. Finucane's proposed visit to Kanika), which I append.

"This subject is, as the Manager remarks, intimately connected with the question of retention or abolition of mustagirs, as, if the mustagirs are to be maintained, they will probably be charged with maintenance, or at least be made to some extent responsible for giving information of mutations; or if they be relieved of this responsibility, their commissions should perhaps be curtailed.

"The first question, however, to decide is what records should be given to the mustagirs or other record-keepers to be maintained. Certainly copy of trace and copy of the khasra when it has been corrected, or they should make a new khasra on the basis of the old khasra.

"The khatians are such enormous and bulky records that it is probably undesirable to copy them in their present form.

"The ekpadya would do with columns added to show khasra numbers with areas. It is copy of the ekpadyas that will be made over to the mustagirs for collection purposes.

"The present ekpadya for Partabpur village without details of plots when rolled up will almost go into one's waistcoat pocket. With the plots added the bulk would of course be greatly increased, but it would still be much less than the bulky khatians.

"For the present I think the Manager should hold his hand in copying the khatians unless we decide to deposit a copy of them in the Collectorate. On this subject I have addressed the Commissioner.

"I incline to the opinion that copy of the ekpadya will be enough for the Collectorate with addition of khasra numbers and areas. With regard to registration of mutations, it may be noted that it has hitherto been the custom in this estate to receive petitions from raiyats for mutation and to file them with the *bhian* or rent-roll of the last settlement. The estate does not keep a detailed yearly rent-roll, showing names of tenants, but only an account of demands due and collections made from mustagirs. The Manager has this month opened a register of petitions for registration of mutations. If tenants are made to come to head-quarters on the Khurda system to register mutations, this register as a case register will be useful. But I incline rather to recommend that mutations be recorded by the Land Records establishment on the ground, and that when reported to head-quarters they should be entered in village registers.

"20. As stated in paragraph 7 above, khasra of the survey has not been corrected. The column 'Class of soil' filled up by the amin has not been changed. Mr. Sakhawat Hossein proposes to have clean copies of the khasra prepared entirely from the khatians which have been only corrected, except the column for "boundaries." He has considered it hopeless to correct the column for 'boundaries,' and has left it untouched. He has a sufficient supply of blank khasra forms to make two copies and of blank khatian forms to make one set.

"21. *Budget estimate for 1894-95*.—I have discussed this estimate with Mr. Sakhawat Hossein, and have written at length about it to the Commissioner, and to save time am sending a copy of my letter to Mr. Sakhawat Hossein direct. The important matter is to decide what records shall be copied.

"22. *Khamar lands*.—The correspondence about khamar lands ends with Board's order No. 364A., dated 28th February 1894. There is no record of khamar lands in the settlement papers of 1865-71, and no record was made of them in the khatians of this settlement; but the attestation muharrirs at attestation time made enquiries and wrote reports to the effect that such and such lands are or were khamar. About 2,000 acres were so identified or claimed at attestation time. I read the report for village Mantpara. It is a list of 59 survey numbers with an area of 30 68 acres with names of tenants occupying. It is not stated that the tenants admit these lands to be khamar. Nothing has been done to prepare

such a khatian for all the khmar lands in a village as Mr. Stevenson suggested in paragraph 4 of his letter No. 2367W., dated 22nd December 1893, nor has the word 'khmar' been entered against the various plots in the khaars and khatiana. Mr. Sakhawat Hossain is doubtful as to the policy of attempting at present, just after the enhancement of rents, to get the raiyats' consent to the land being recorded as khmar. Mr. Stevenson has also stated in his inspection note, dated 30th November 1893, that the time is not auspicious for attempting to assert the claims to khmar. The practical methods in which claims to khmar could now be asserted would be by giving pattas and taking kabuliyats or by entering the word 'khmar' in the hukumnamas which are to be issued to the tenants under orders contained in Board's letter No. 297A., dated the 23rd February 1893. Hukumnamas have not yet been issued and are not all ready. I would not defer issue of the hukumnamas any longer. It would have been well if they could have been issued at the time of collection of the January and March kista, and as many as possible should be issued in May. In the case of tenants who hold land which the Manager thinks may be claimed as khmar, I would put a note on the hukumnama to the effect that with regard to any khmar lands proceedings will be taken hereafter. I would then proceed by taking kabuliyats when possible.

"23. The completion report for the settlement is promised shortly. I made some suggestions to Mr. Sakhawat Hossain with regard to its arrangement. As far as I can judge from the hasty inspection of the work which I have been able to make, Mr. Sakhawat Hossain has worked with much intelligence and has spared no pains to make an equitable and successful settlement."

Part IV.

Results and Cost.

CHAPTER I.

DETAILS OF AREA OF RAJSARKAR LAND, PAST AND PRESENT.

249. The total area of the estate, as ascertained by the present settlement, is 439.81 square miles, or 281,478.40 acres, and is comparatively shown in the following statement, arranged under different heads and scales of survey:—

	JUNGLES.			RIVERS.			SURVEYED TO 16 INCHES TO A MILE.			Grand total.	REMARKS.
	Surveyed to 4 inches to a mile.	Surveyed to 16 inches to a mile.	Total.	Surveyed to 4 inches to a mile.	Surveyed to 16 inches to a mile.	Total.	Rajsarkar lands.	Cultivated or otherwise occupied.	Total.		
	1	2	3	4	5	6	7	8	9	10	11
According to present settlement.	87,000.00	12,056.00	100,056.70	6,323.00	10,742.76	17,100.76	36,100.61	126,281.33	164,381.94	281,478.40	The figures in column 7 include some 5 acres under estate buildings.
According to past settlement.*	...	...	207,051.98	...	...	10,823.72	50,204.15	116,972.08	175,672.08	402,227.78	

The great difference between the present and the past areas under jungles and rivers is due to the fact that the old areas are all mere guesses, jungles and rivers having never been measured before.

The jungles include a number of open lawns, meadows and sands, but as they have not been separately surveyed, their areas cannot be separately given. The river area shown above is only what has been separately surveyed: some creeks and rivers have been included in village areas and some in jungles.

250. The following statement exhibits the details of area under *rajsarkar* included in village areas both for present and past settlements:—

Description of land.	Area as per present settlement.	Area as per last settlement.*	REMARKS.
1	2	3	4
	Acres.	Acres.	
1. Culturable waste (Laik) ...	3,535.92	7,755.67	The area under buildings being small, it has not been separately shown.
2. Roads, footpaths and estate buildings.	571.43	487.70	
3. Embankments ...	272.00	231.29	
4. Burial grounds ...	343.87	204.79	
5. Orchards ...	194.16	135.59	
6. Tanks, ponds and ditches ...	1,050.79	1,202.96	
7. Irrigation channels ..	429.46	400.06	
8. Reservoirs of water ...	545.35	313.43	
9. Grazing grounds ...	18,579.95	35,001.44	
10. Cattle-paths ...	7,052.62	9,250.35	
11. Creeks ...	3,525.06	4,310.97	
Total ...	36,100.61	59,294.15	

* Areas of last settlement are shown in acres after making allowance of 10% per cent. for 1 in paragraph 218 above, and are according to reat-roll corrected up to last year.

The difference between the old and the new areas for the different descriptions of lands shown above is generally accounted for by the fact that no one in particular being interested in the accuracy of measurements regarding unoccupied lands, they were more or less carelessly measured at the previous settlements, and there must necessarily be difference between areas as ascertained by the present professional survey and those recorded in the old papers.

The old areas under culturable waste (1), tanks, ponds and ditches (6), grazing grounds (9), cattle-paths (10), and creeks (11) have decreased since the last settlement, and the decrease is in part due to extension of cultivation. The increase in the present areas under other heads is also in part explained by the fact that additional lands have now come under them and that they have been carefully measured.

CHAPTER II.

DETAILS OF AREA AND RENTAL OF OCCUPIED LANDS, PAST AND PRESENT.

Comparative details of occupied lands.

251. The following table exhibits the details of occupied lands in the estate:—

By whom held.	No. of holdings.	AS PER PRESENT SETTLEMENT.		AS PER LAST SETTLEMENT.	
		Area.	Rental.	Area.*	Rental.
1	2	3	4	5	6
			Rs. A. P.		Rs. A. P.
1. Government	24	198.67	...	199.66	...
2. District Board, Cuttack ...	9	30.38	...	26.90	...
3. District Board, Balasore ...	13	68.60	...	160.18	...
4. The Raja	3	45.67	...	52.45	...
5. The Raja's mother	10	92.77	149 8 0	102.86	134 2 7
6. Proprietary or permanent tenure-holders.(a)	4,836	17,630.61	6,666 6 9	19,367.66	5,363 18 2
7. Jungle reclamation lease-holders.	5	1,044.17	677 4 0	707.06	344 7 6
8. Service tenure-holders ...	488	1,144.62	663 3 3	1,180.12	551 5 6
9. Raiyats under the proprietor.	26,098	107,966.24	1,37,917 8 0	94,491.15	1,06,238 14 11
Total ...	30,980	128,221.83	1,36,063 14 0	116,377.93	1,12,632 11 6

* Areas of last settlement are expressed in acres after making allowance of 16 per cent. for present chain measurement, and are according to rent-roll corrected up to last year.

(a) Vide footnote against paragraphs 80 and 146.

252. Speaking generally, the old areas are only approximately correct; and

General explanation for the discrepancy between the past and the present areas for occupied lands.

this fact, in part, accounts for the discrepancy between the old and the new areas for occupied lands. Under the native system of measurement, there are no efficient checks, such as the traverse survey is over the subsequent cadastral work; and even apart from the venality of low paid amins, which no amount of supervision can altogether stop, there are several sources of error incidental to the measurements by the rod. The very mode of throwing the pole, the exclusion of field partitions and small patches of ground in the midst of cultivated fields, the striking of averages for length and breadth of plots, and the omission of fractions in the extraction of areas—all contribute to the inaccuracy of work.

253. The Hansood creek was acquired by Government in 1881, as stated

Government land.

in paragraph 20 above, and though it is no longer kept up as a canal, it is owned by Government. Its area, in acres, as revealed by the present survey, is nearly the same as the old area in *māns*, which are converted into acres when allowance for close measurement is made, and, in this instance, the difference resulting from the different systems of measurement in the last and the present settlements, is nearly equal to the amount of the allowance which has been sanctioned for the present chain survey.

PART IV.
CHAP. II.

254. The land under the road passing from Ganja to Chandbally was acquired by Government in 1867, and it is now held by the District Board, Cuttack. Its present area is a little more than the old area, but no fresh land has been taken up, and the difference is merely due to the inaccuracy of the last measurement.

The road from Chandbally to Bhadrak passes through the estate from Chasakhand to Santrapur, and the land covered by it, is temporarily occupied by the District Board, Balasore, not having been duly acquired by it according to law. Its area has considerably decreased, as part of the area originally occupied has been given up.

255. Some homestead sites under houses, gardens and tanks which were in former Raja's own possession, are still recorded as *rajsarkar*. They are held, some by the morganatic widow of the late Raja and some by the present Rani.

256. Besides these sites, it is said there were some 4,000 acres of khamar lands in the estate; but they were all settled away as raiyati lands in the settlement of 1865—71, which was made during the Court of Wards' management and while the then proprietor was a declared lunatic. Under the circumstances, the settlement of khamar lands as raiyati lands, it is believed, did not change the character of them as against the present proprietor. There has been some correspondence on the subject, and for the present it is settled that such of the khamar lands as have been identified be noted in the remark columns of the khatians and the hukum-namas "as khamar claimed by the Manager." Especial khatians for such lands will afterwards be prepared, and attempt made to obtain the consent of the raiyats, who are holding them at present, to their being recorded as "khamar." In the meantime they are shown as if they were raiyati, as they have been treated since the settlement of 1865—71.

257. The Rani has been holding, under a permanent tenure, an orchard measuring 4.13 acres, 3.67 acres as rent-free and 0.46 as resumed. In the following statement the past and the present area and rental are compared:—

Number of holdings.	RENT-FREE.		RESUMED.				TOTAL.			
	Old.	New.	Old.		New.		Old.		New.	
			Area.	Rental.	Area.	Rental.	Area.	Rental.	Area.	Rental.
1	2	3	4	5	6	7	8	9	10	11
1	4.87	3.67	0.63	Rs. A. P. 0 3 9	0.46	Rs. A. P. 0 4 0	5.50	Rs. A. P. 0 3 9	4.13	Rs. A. P. 0 4 0

She has also been holding, since 1865, some rent-paying raiyati land as shown below:—

Number of holdings.	OLD.		NEW.		REMARKS.
	Area.	Rent.	Area.	Rent.	
1	2	3	4	5	6
9	97.86	Rs. A. P. 133 14 10	88.64	Rs. A. P. 149 4 0	

Comparative details of proprietary tenures.

258. The details of proprietary tenures are comparatively shown in the following statement:—

PART IV.
CHAP. II.

Nature of tenure.*	No. of holdings.	RENT-FREE.		TONKI.		RAJYATI.		TOTAL.			
		Present area.	Old area.	Present area.	Old area.	Present area.	Old area.	Present.		Old.	
								Area.	Rental.	Area.	Rental.
1	2	3	4	5	6	7	8	9	10	11	12
Debottar ...	1,591	4,000'30	6,329'47	1,804'01	1,800'30	1,014'28	890'39	7,807'30	Ra. A. P. 1,748 14 8	8,709'25	Ra. A. P. 1,811 0 8
Piottar ...	51	20'37	45'25	5'25	11'71	5'25	9'45	20'45	20 2 3	64'34	16 14 8
Brahmottar ...	1,028	2,161'45	2,300'45	2,322'07	2,402'21	1,068'94	895'51	6,440'59	2,186 0 1	6,424'14	1,627 8 9
Khairat ...	220	550'30	522'78	501'58	520'08	204'00	252'13	1,227'42	820 11 7	1,328'27	576 10 9
Khushda ...	840	154'28	204'77	1,801'08	1,804'37	208'24	818'27	2,207'62	1,020 12 10	2,327'81	1,402 0 9
Dattasena-grah.	46	21'47	24'12	15'16	15'66	120'12	155'13	178'08	191 1 10	190'50	120 5 1
Resumed unspecified.†	107	...	...	...	...	206'51	220'31	206'51	233 12 0	230'31	106 10 0
Total ...	4,336	7,645'30	9,477'36	6,326'06	6,765'68	4,220'25	3,148'00	17,630'51	6,606 0 9	19,267'56	5,363 12 2

* The nature of these tenures has been explained in paragraphs 26 and 140 above. A statement in a suitable form is under preparation showing details of area and rental for each tenure-holder and service jagir-holder. I have translated this report into Urdu, and the statement will be attached to the Urdu copy of the report for future use.

† The original character of these tenures not having been specified in the records of 1865-71 when they were resumed, they are shown separately.

There are six kinds of proprietary or permanent tenures, and they were originally granted, partly as rent-free and partly as at fixed rent locally called *tonki*. At the settlement of 1865-71, besides invalid tenures which were resumed amounting to some 2,000 acres, some 1,000 acres of valid ones, having, on measurement, been found to be in excess of the grants, were resumed, and for like reasons some 420 acres have been resumed at this settlement, in addition to 208·51 acres which, having been sold, have, in accordance with the usual practice, been also resumed, and so there are resumed lands amounting to 3,029·56 acres, and the permanent tenures therefore consist of lands partly rent-free, partly *tonki*, and partly resumed.

259. There is considerable difference between the past and the present

Explanation of the difference in the past and present areas under permanent tenures.

area of the *debottar* rent-free tenure, and this difference is principally due to some 1,200 acres of rent-free land which having gone, since long, out of cultivation and reverted to jungle, have been included in jungle blocks. The increase in the present area of resumed lands is owing to some 628 acres having been added to them, as explained in the last paragraph. The rest of the discrepancy between the old and the new areas, under the different tenures, is simply owing to the inaccuracy of the last measurement.

260. Ordinarily the lands included in the proprietary tenures are cultivated

Raiyats under proprietary tenure-holders.

by raiyats to whom they are usually let out on what is locally called *bhag* system, the share of the landlord varying from $\frac{1}{2}$ to $\frac{3}{4}$ of the produce. *Debottar* and *piottar* lands are sometimes leased out at rents fixed in cash, but the rent system is not generally followed. The raiyats of the tenure-holders have not, as a rule, taken any trouble to get their rents and rights recorded, and they have had to be sought out. The following statement gives an account of the lands held by raiyats holding under the rent-free, *tonki*, and resumed proprietary tenure-holders*:

Class of raiyat.	No of holdings.	Area held.	REMARKS.
1	2	3	4
Thani ...	2,187	3,535'39	
Pahi occupancy ...	782	1,187'44	
Pahi non-occupancy ...	967	613'24	
Total ...	3,886	5,336'07	

* No rents are shown as none have been recorded, as explained in paragraph 186 above, nor are old areas shown as none were recorded at the last settlement.

PART IV.
CHAP. II.

261. There are, as shown in paragraphs 81 and 171 above, five jungle reclamation tenures created since the completion of the last settlement, and their details are shown below:—

Name of village held.	Name of tenure-holder.	OLD.*		NEW.		Area in cultivation, possession of tenure-holders.	Area held by raiyats.	REMARKS.
		Area.	Rental.	Area.	Rental.			
1	2	3	4	5	6	7	8	9
Saradaprasad ...	Srirup Chandra Sarker	20'05	Rs. A. P. 23 15 6	78'77	Rs. A. P. 47 12 0	20'00	20'77	
Kamalpur ...	Trailokya Nath Sarker	84'44	44 6 4	145'05	36 12 0	125'30	12'13	
Pinchhapatia ...	Rattan Maharathi ...	115'00	80 9 3	106'86	116 0 0	115'47	78'13	
Chapmanpur Bahipur	Srirup Chandra Sarker	480'81	197 4 10	520'56	236 8 0	127'48	27'313	
Sanakujli ...	Ditto	28'05	18 3 8	100'96	28 4 0	11'28	20'3	
	Total ...	707'05	244 7 8	1,044'17	677 4 0	451'23	609'89	

* Old area and rent shown are according to rent-roll corrected up to last year.

The raiyats under tenure-holders holding 609'89 acres are all *pahi*, of whom 807 holdings are occupancy and 29 non-occupancy.

262. Service-tenures, which would now properly speaking be holdings, are held, as already stated in paragraph 141 above, by—

- (1) the servants of the estate;
- (2) the superior servants of the Raja;
- (3) the private servants of the Raja's household, and by
- (4) the servants of *thani* villages;

and they were originally granted either as rent-free or *tonki*, or partly rent-free and partly *tonki*, and were partly resumed at the settlement of 1865—71, and some 13 acres have been resumed at this settlement, being in excess of the area covered by the grants after allowance for close measurement. The details of these tenures are shown in the following statements:—

Statement showing the details of tenures held by the servants of the estate.

No.	By whom held.	No. of holdings.	AREA HELD.						TOTAL.				REMARKS.
			RENT-FREE.		TONKI.		BAJYAPTI.		OLD.		NEW.		
			Old.	New.	Old.	New.	Old.	New.	Area.	Rental.	Area.	Rental.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Pahars ...	60	...	...	174'98	165'26	0'47	2'00	175'45	Rs. A. P. 34 9 4	165'56	35 12 3	
2	Ferryman ...	5	14'37	10'08	7'99	7'47	0'47	0'71	22'73	1 3 8	27'21	1 7 8	
3	Chaukidars ...	43	180'71	102'89	...	...	...	2'37	183'71	...	165'16	1 14 0	
	Total ...	97	201'06	121'98	182'95	173'03	0'94	2'78	204'87	36 3 0	203'93	40 2 11	

Statement showing the details and tenures held by the superior servants of the Raja.

By whom held.	No. of holdings.	AREA HELD.						TOTAL.				REMARKS.
		RENT-FREE.		TONKI.		BAJYAPTI.		OLD.		NEW.		
		Old.	New.	Old.	New.	Old.	New.	Area.	Rental.	Area.	Rental.	
1	2	3	4	5	6	7	8	9	10	11	12	13
Bhamantas	33	...	...	...	...	216'76	127'21	216'76	Rs. A. P. 102 10 5	127'21	Rs. A. P. 223 4 0	

Statement showing the details of tenures held by the private servants of the Raja.

PART IV.
CHAP. II.

No.	By whom held.	No. of holdings.	AREA HELD.						TOTAL.				REMARKS.
			RENT-FREE.		TOSKI.		BAJYAPTI.		OLD.		NEW.		
			Old.	New.	Old.	New.	Old.	New.	Area.	Rental.	Area.	Rental.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Brahman cooks	12	.....	.....	22'25	22'06	.....	0'22	22'25	Rs. A. P.	22'25	Rs. A. P.	
2	Brahman waiter	1	.....	.....	5'45	5'33	.....	.....	5'45	7 2 1	5'33	7 2 1	
3	Physicians	4	2'20	2'25	22'74	19'11	.....	0'40	22'02	6 9 1	21'28	7 1 1	
4	Boatmen	19	.....	.....	127'80	117'48	1'02	2'17	129'31	41 4 8	120'75	40 12 0	
5	Barbers	10	15'00	15'00	20'14	25'23	.....	0'70	45'94	7 8 2	42'05	6 4 9	
6	Carpenters	3	.....	.....	3'11	2'94	.....	.....	3'11	0 12 4	2'44	0 12 4	
7	Blacksmith	1	.....	.....	1'77	1'61	.....	.....	1'77	0 7 1	1'61	0 7 1	
8	Potter	1	.....	.....	2'48	2'30	0'26	0'70	3'43	1 3 4	3'20	1 3 9	
9	Gardener	1	0'61	0'58	.....	.....	.....	.....	0'61	.....	0'58	.....
10	Washermen	3	.....	.....	15'48	14'71	.....	3'62	15'48	3 12 10	14'33	7 7 10	
11	Drummers	1	4'72	4'37	.....	.....	.....	.....	4'72	.....	4'37	.....
12	Pipers	6	1'07	1'44	.....	.....	.....	.....	1'47	.....	1'44	.....
13	Sweeper	1	0'14	2'03	.....	.....	.....	.....	4'14	.....	3'03	.....
14	Bird-catchers	17	2'08	3'38	.....	.....	0'22	0'24	4'78	1 12 8	4'24	2 8 0	
	Total	80	22'00	31'36	226'10	217'34	3'40	10'23	274'40	73 4 3	258'03	70 10 4	

Statement showing the details of tenures held by the village servants.

No.	By whom held.	No. of holdings.	AREA HELD.				TOTAL.				REMARKS.
			RENT-FREE.		BAJYAPTI.		OLD.		NEW.		
			Old.	New.	Old.	New.	Area.	Rental.	Area.	Rental.	
1	2	3	4	5	6	7	8	9	10	11	12
1	Barbers	63	12'56	12'01	0'30	0'33	12'26	Rs. A. P.	12'56	Rs. A.	
2	Washermen	78	12'38	12'14	0'51	0'28	20'10	0 10 6	12'90	1 6	
3	Carpenters	15	4'28	4'16	.....	0'06	4'04	1 6 3	4'28	1 16	
4	Blacksmiths	14	4'28	4'04	.....	.....	4'04	.....	4'28	0 2	
5	Potters	35	11'43	10'25	.....	0'28	11'23	.....	11'74	4'28	.....
	Total	190	55'35	49'78	0'81	2'31	56'16	2 0 11	52'04	4 14	

The slight difference between the areas, old and new, is accounted for by the difference in the systems of measurement adopted at the last and the present settlements, and the smallness of the difference shows how close has been the allowance which has been made for the present chain measurement.

263. The lands included in service-tonures are almost all cultivated by the tenure-holders themselves, and some by cultivators under them. These cultivators would be under-raiyats and not raiyats, and they will be shown along with the under-raiyats under *thani* and *pahi* raiyats.

264. The raiyati lands are, as stated in paragraph 78 above, comprised in (1) *thani* and (2) *pahi* holdings. *Thani* or settled raiyats either hold homestead lands with or without rice lands. If the former, they are *thani* proper, and if the latter, they are *chandna*. *Pahi* holdings are either occupancy or non-occupancy, and are held either by the raiyats of the estate or by outsiders. of raiyati lands are shown in the following statement:—

Class of holding.	No. of holding.	AREA.*		RENTAL.†		REMARKS.
		As per present settlement.	As per last settlement.	As per present settlement.	As per last settlement.	
1	2	3	4	5	6	7
Settled { <i>Thani</i> ...	11,772	68,000'11	58,400'20	Rs. A. P.	Rs. A. P.	
Chandna	1,532	248'48	219'77	77,283 8 0	60,714 13 7	
Pahi occupancy, resident	10,505	35,703'95	31,419'24	711 14 0	546 11 8	
Do, non-resident	605	2,712'00	2,512'00	60,722 6 0	32,161 11 8	
Pahi non-occupancy, resident	1,005	2,962'19	1,781'24	2,048 10 0	2,376 12 6	
Do, non-occupancy	60	200'20	20'27	2,265 8 0	1,240 18 0	
Total	24,899	107,002'54	94,401'75	1,37,217 8 0	1,04,222 14 11	

* as per last settlement, all through the report, are expressed in acres after making allowance of 10% per cent. for chain & are as according to rent-roll corrected up to last year, as explained in Chapter IV, Part II, above.
† as per last settlement, all through this part, means according to corrected rent-roll up to last year, and not what was the last settlement. The extent of revision in the rent-roll of last settlement has been explained in Part II, Chapter IV.

PART IV.
CHAR III.

The increase in the present areas over that of the past areas is mostly due to the extension of cultivation and some to the inaccuracy of the last measurement. There has been considerable increase of area under *thani* and *pahi* (resident) holdings and little or no increase under other raiyati holdings. The difference in the area held by non-resident occupancy *pahi* raiyats, as recorded in the last settlement, and as ascertained by the present survey, is very small, and this goes to show that the amount of allowance for the difference resulting from the different systems of measurement adopted at this and the last settlement has been very close. A small area of recent extension of cultivation having been settled with outsiders, there has been some increase under non-occupancy *pahi* holdings of non-residents.

Average size of holdings.

265. The average size of a—

1) <i>Thani</i> holding is ...	4.94
2) <i>Thani chandna</i> holding ...	0.24
3) <i>Thani</i> proper " ...	5.39
4) <i>Pahi</i> ...	3.36
5) <i>Pahi</i> occupancy holding ...	3.31
6) <i>Pahi</i> non-occupancy holding ...	3.71
7) <i>Pahi</i> occupancy holding held by Kanika raiyats ...	3.26
8) <i>Pahi</i> non-occupancy holding held by Kanika raiyats ...	3.71
9) <i>Pahi</i> occupancy holding held by outsiders ...	4.18
10) <i>Pahi</i> non-occupancy holding held by outsiders ...	3.86

The average size of a holding does not, however, convey any idea of the quantity of land each resident raiyat holds. The number of holdings in the estate does not mean the number of raiyats in it. A *thani* raiyat of one village, holding land in other villages, has as many holdings as there are villages in which his land lies, and his holding is *thani* for the one in which he resides and *pahi* for the others. The total quantity of rice land in the estate is 104,966 acres, of which 2,970 acres are held by outsiders and the balance, viz., 101,996 acres, is held by the Kanika raiyats, and the average quantity held by each is therefore 7.96 acres. The total quantity of homestead land in the estate held by *thani* and *chandna* raiyats is about 3,000 acres, and the average quantity of upland held by each Kanika raiyat is therefore 0.23 of an acre. A *thani* raiyat thus holds on an average 7.96 acres of rice land and 0.23 of homestead.

266. Most of the raiyati and service lands are cultivated by the raiyats themselves, and only a small portion is let out to under-raiyats on what is locally called *bhag* system.

Under-raiyats.

The under-raiyats, as a rule, did not take any interest in having their names recorded, and they had to be searched out. The number of under-raiyats and the area of land held by them in the estate are:—

Under-raiyats.	Area held.*
1	2
2,109	2,482.68

CHAPTER III.

MISCELLANEOUS INCOMES.

Miscellaneous sources of income.

267. Besides land rents, there are several sources of income which add to the rent demand of the estate, and they are:—

- (1) Fisheries (*Machhdia mahal*);
- (2) Pasture (*Charau* ");
- (3) Jungles (*Banakar* ");
- (4) Fruits (*Fakar* ");
- (5) Weeds (*Nahakar* ");
- (6) Honey and wax (*Mahu-mohan*);
- (7) Markets (*Hats*);
- (8) Ferries (*Ghats*); and
- (9) Alluvions (*Palandds*).

* The areas held by under-raiyats not having been recorded at the last settlement, past and present areas cannot be compared. The rents payable by under-raiyats not having been recorded for reasons explained in paragraph 166 above, they are not shown here.

Fisheries.

268. The fisheries of the estate, as explained in paragraph 31 above, are divided into :—

PART IV.
CHAP. III.

1. River fisheries.

2. Creek fisheries.

3. Tank fisheries.

The river fisheries include those of the estuaries of Dhamra and Mypara and of the entire river area amounting to 17,100·76 acres. The creek fisheries include those of the creeks covering an area of 3,525·06 acres. The tank fisheries were, for the first time, it appears, settled in 1868, and continued to be so let out till 1890 when, with the Commissioner's sanction, contained in his No. 449W., dated the 1st July 1890, their settlement was discontinued, the tanks being reserved for supply of water for drinking and other domestic purposes.

It is difficult to trace the history of the settlements of the river and the creek fisheries from Raja's time; but it appears that in 1843 they were settled, probably by amicable arrangement, for Rs. 405-11-4, the fisheries of the rivers for Rs. 403-4-5, and those of the creeks for Rs. 2-6-11. In 1868 and 1880 the fisheries of the rivers were, it appears, settled by public auction, and those of the creeks and the tanks by private arrangement. At the present settlement all the fisheries have been settled by public auction, and the results of their settlement, past and present, are comparatively shown in the following statement :—

Name of fishery.	RENT ACCORDING TO SETTLEMENT OF—				REMARKS.
	1843.	1868.	1880.	1893.	
1	2	3	4	5	6
	Rs. A. P.	Rs.	Rs.	Rs.	
River fishery ...	403 4 5	1,635	2,400	6,825	
Creek „ ...	2 6 11	694	626	2,718	
Tank „ ...	.....	214	168	...	
Total ...	405 11 4	2,543	3,194	9,543	

269. The area under pasture included in village areas, as stated in paragraph 101 above, is 18,579·95 acres, and that included

Pasture.

in jungle blocks is estimated at 30,000 acres. No charge has ever been made for grazing farm animals other than buffaloes, and the charge for each buffalo has varied from time to time. In the papers filed by Raja Benayak Bhanj in 1843, the rent for this mahal was shown to be Rs. 640-2-6 at one rupee per head, including young calves and old animals. This was objected to by the tenants during the settlement of 1843—45, and the charge was reduced by the Deputy Collector in charge to one rupee for every 3 head of buffaloes, exclusive of calves and old animals, for which no charge was to be made. On appeal to the Commissioner, a further reduction was made, and finally the charge was fixed at one rupee for every 5 head of buffaloes, exclusive of calves and old buffaloes. In the settlement of 1868* the annual charge made was 4 annas per head, in that of 1880, a rupee for every 10 heads, and in the present settlement, 4 annas per head of buffalo, excluding young and old animals. Previously, this mahal used to be settled by private arrangement, but at the present settlement

* The rents fixed for buffaloes in the settlement of 1868 could not be realized under any law, and their collection was a for some five years. The rate was afterwards reduced to one rupee for every 10 head of buffaloes, this rate was maintained in the last settlement of 1880.

PART IV. it has, like other miscellaneous rights, been settled by public auction, and the
CHAP. III. results of settlement, past and present, are shown in the subjoined statement:—

Name of Elakah.	RENT ACCORDING TO SETTLEMENT OF—				REMARKS.
	1843.	1868.	1880.	1893.	
1	2	3	4	5	6
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Panohmuka ...	503 6 5	694 9 7	528 1 9	400 0 0	
Chhamuka ...	41 0 0	57 4 5	52 12 0	34 0 0	This has been settled in 1894 for Rs. 36.
Kerara ...	164 6 4	105 4 10	95 0 0	191 0 0	This has been settled in 1894 for Rs. 437.
Kaladwip ...	78 12 6	95 0 0			
Total ...	847 9 3	952 2 10	675 13 9	625 0 0	

Since 1885 there have been several storms and cyclones from the exposure to which a considerable number of buffaloes have died, and the rent for this mahal has, in consequence, fallen off.

270. The jungles cover, as shown in paragraph 249 above, an area of 100,055·70 acres and contain trees chiefly fit for firewood. There are a few trees, shrubs, weeds, reeds and grasses which are in various ways locally utilized.

During Raja's time the jungles, it appears, yielded no income, nor was any regular settlement made till 1868, when they were settled by public auction with three persons, one taking the jungles of Panohmuka, another those of Chhamuka, and the third those of the two southern Elakahs of Kerara and Kaladwip. In 1880 they were similarly settled, but at the present settlement all the estate forests have been settled in one lot.

Formerly the lessees of this mahal were permitted to charge fees for jungle produce, not exceeding 2 pice per maund, but on the present occasion the following scale of fees have been prescribed:—

1. For each *thani* raiyat taking, for his own use, firewood, materials for house-building, wooden parts of ploughs, &c. 4 annas a year;
2. For each party of resident raiyats having *pahi* cultivation near jungle blocks and constructing temporary huts and sheds and consuming firewood from the adjacent jungles 4 ditto;
3. For each party of non-resident raiyats having *pahi* cultivation like the above ... 8 ditto;
4. For every resident potter taking firewood for his kilns ... 4 ditto;
5. For resident blacksmith taking charcoal from the jungle... 8 ditto;
6. For each fishing net dyed in the decoction of *garat* bark... 1 rupee a year;
7. Kanika fishermen fishing in the estuaries and rivers, taking firewood, &c., for local consumption from adjacent jungles, for each fishing boat ... 4 annas a year;
8. Outsiders similarly fishing and taking firewood, &c., for local consumption, for each fishing boat ... 8 ditto; and
9. For each outsider keeping shop in the estate and taking firewood, &c., from the jungles for consumption in the estate ... 8 ditto.

For cases not covered by the above scale of fees, the old rate of 2 pice per maund is not to be exceeded.

There were no restrictions before for regulating jungle clearances. At the present settlement, some portions of the forests and some trees have been reserved, and I think further measures will have to be taken in this respect. Lands wanted for cultivation should alone be cleared, and the cutting of trees in the rest of the jungles should not, as a rule, exceed their yearly growth. It is generally believed that forests have some influence over rainfall, and if there is any the slightest truth in it, the jungles in Kanika should not be permitted

to be uselessly cleared to any large extent. The results of the settlement of this mahal, past and present, are shown in the following statement:—

PART IV.
CHAP. III.

Name of Elakah.	RENT ACCORDING TO SETTLEMENT OF—			REMARKS.
	1868.	1880.	1893.	
1	2	3	4	5
Panchmuka ...	Rs. A. P. 90 9 2	Rs. A. P. 168 0 0	} 4,000 0 0	
Chhamuka ...	600 0 0	1,090 0 0		
Kerara and Kaladwip	210 0 0	335 0 0		
Total ...	900 9 2	1,593 0 0	4,000 0 0	

271. Before 1843 it seems the Rajas used to take all the fruits to the palace, giving a portion, by way of remuneration, to the tenants appointed to keep watch, and no rents for *falkar* were, in accordance with the previous practice, fixed in the settlement of 1843-45. In 1868, for the first time, it appears, fruit trees on estate as well as raiyati lands were assessed at rates varying from 1 to 2 annas per tree, and the *jama* included in village *jambandies*. This system was followed in the settlement of 1880 too. I was so long under the impression that the raiyats had full right to the fruits of trees planted by them in their own *thani* lands, but not to their timber. I now find that I was wrong. During the time of the Rajas, it seems very probable that some share of the fruits used to be allowed to the tenants for keeping watch and guard, and later on when fruit trees were settled, it was the proprietor's share that was settled and not the whole of the fruits. At the present settlement, however, all fruit trees on raiyati lands have been excluded from the settlement, and only the fruits of trees on waste lands and in Raja's own topes and orchards have been settled by public auction and lease granted in the form sanctioned by the Board in their No. 59A., dated the 5th February 1894. The results of the last and the present settlement given below will, however, show that the exclusion of raiyati trees have not resulted in any reduction of rent from this source. The right of the proprietor to a share of the fruits of trees grown by his tenants is, however, of considerable value, and it should not be relinquished. During the Court of Wards' management of the estate the tenants may be permitted to enjoy the fruits of trees they have grown, or may hereafter grow on lands leased by them, but this concession should not bind the proprietor:—

ACCORDING TO SETTLEMENT OF—				REMARKS.
1880.		1893.		
No. of trees.	Rent.	No. of trees.	Rent.	
1	2	3	4	5
2,037	Rs. A. P. 158 10 11	3,466	Rs. A. P. 376 5 0	

As regards timber, the existing practice is not to allow any trees, whether planted by the tenants or not, to be cut down. If any die or are blown down by storms, the timber is sold and the price credited to the estate. The tenants

PART IV.
CHAP. III.

have no right to any timber. This does not cause any hardship, inasmuch as the estate jungles supply all what the tenants require. There are, comparatively, few trees in the estate, and the present practice of not cutting them is therefore advantageous both to the tenants and the estate. Bamboos, *sajna* and a few other trees and shrubs, the timber of which is of little value are, however, fully enjoyed by tenants in this estate.

272. *Nalia* is the name of a particular species of weed growing wild in the waste parts of the estate, especially along the banks of creeks and rivers. Its stem is used for making fine baskets and its leaves for mats. Both baskets and mats are much prized in the estate where they are consumed, and are seldom sent out to other places.

During the Raja's time this source was not developed, nor till 1868, when a beginning was made. At the last settlement in 1880 it was settled by amicable arrangement, in six lots, and at the present settlement it has been settled by public auction, like other miscellaneous rights, in five lots. The results of settlement, past and present, are shown in the following statement:—

Name of Elakah.	RENT ACCORDING TO SETTLEMENT OF—			REMARKS.
	1868.	1880.	1893.	
1	2	3	4	5
	Rs.	Rs.	Rs.	
Chhamuka { 1st lot ...	...	11	} 25	* This was settled by public auction in 1887.
2nd lot ...	...	32		
Panchmuka { 1st lot ...	20	20	50	
2nd lot ...	...	10	54	
Kerara, one lot ...	...	9	12	
Kaladwip, one lot ...	5	5	8	
Total ...	25	87	149	

273. It has been stated in paragraph 30 above that honey and wax are gathered from the estate jungles. During the time of the Rajas no income was derived from this source. Income from honey and wax. In 1868 the right to gather honey and wax was, for the first time, settled by amicable arrangement. The results of the settlement of this source of income, past and present, are shown in the following statement:—

Name of Elakah.	RENT ACCORDING TO SETTLEMENT OF—			REMARKS.
	1868.	1880.	1893.	
1	2	3	4	5
	Rs.	Rs.	Rs.	
Chhamuka ...	20	22	} 276	
Panchmuka ...	.....	.....
Kerara and Kaladwip ...	.....	12		
Total ...	20	34	276	

274. A description of the markets of the estate has been given in paragraph 53 above. There were, it seems, no markets before 1850, and those now in existence have been

Markets.

established since that year. The following statement shows the income for each market, past and present:—

PART IV.
CHAP. XII.

Name of Market.	RENT ACCORDING TO SETTLEMENT OF—			REMARKS.
	1870.	1880.	1893.	
1	2	3	4	5
Ghanteswar	Is debottar property.
Matto ...	15	50	226	
Gunja ...	20	30	80	
Rajnagar ...	40	40	30	
Keraragarh ...	...	32	44
Nagarh ...	6	13	...	
Total ...	81	165	380	

The market at Keraragarh, Elaka Kerara, has been opened since 1884, and since that year the income of the other two markets in the Elaka, viz., Rajnagar and Nagarh, has fallen off. One has had to be closed and the other to be let out at a reduced rent. There has, however, been considerable rise in the income of the markets in other Elakas.

275. During the time of the Rajas it appears there was no income from ferries which were free, ferrymen being paid partly by the estate in land grants, and partly by tenants in kind. The following statement exhibits all the ferries of the estate and the rent payable for each since 1868:—

Name of Elakah.	Name of Ferry.	RENT ACCORDING TO SETTLEMENT OF—			REMARKS.
		1868.	1880.	1893.	
1	2	3	4	5	6
Chhamuka ...	Ganja river ferry ...	Rs. A. P. 51 0 0	Rs. A. P. ...	Rs. A. P. ...	Now held by the District Board of Outtaok. Discontinued.
	Mahurigaon ...	25 0 0	...	...
	Righagarh ...	...	4 3 9	8 0 0
	Bandhamal ...	...	...	129 0 0
	Ganja creek ...	...	...	74 0 0
Panchmuka...	Balliapal ...	26 0 0	Now held by the District Board of Balasore. Was free while under the estate, but since 1869 it is held by Balasore District Board. Discontinued.
	Panchtikri ...	...	...	...
	Teradowria ...	6 0 0	7 0 0	78 0 0	
	Durgapur ...	3 0 0	...	...
	Jantooli ...	...	35 0 0	400 0 0
Kerara ...	Chowdhurytutho	7 0 0	80 0 0	Discontinued.
	Sana Tilanohi ...	...	4 0 0	25 0 0
	Nalitapatia ...	...	6 0 0	62 0 0
	Naldia ...	5 0 0	9 0 0	56 0 0	
	Rajpur ...	3 0 0	3 0 0	...	
Kaladwip ...	Ghoraparua	Free.
	Hansina ...	...	...	21 0 0
	Rajnagar ...	...	...	...
	Penth ...	...	...	...
	Kusunpur ...	...	...	...
Total ...		119 0 0	75 8 9	928 0 0	

PART IV.
CHAP. III.

When the road between Kendrapara and Bhadrak was constructed and a ferry at Chandbally opened, the Ganja ferry was taken over by Government and the Mahurigáon ferry discontinued. The Balliapal and the Panchtikri ferries were also taken over by Government in 1869, as at that time a salt manufactory was opened at Karanjmal. The Panchtikri ferry was maintained free by the estate for the convenience of non-resident cultivators of Muka Saraswati. There is no longer any salt manufactory at Karanjmal, and the two estate ferries should be restored to it. An application was made for the restoration of the Panchtikri ferry, but it has been refused by the Commissioner. A free ferry is necessary to be maintained at Panchtikri in order that the culturable waste land of Muka Saraswati may be brought under cultivation, and the question will be raised again.

276. Some recently formed alluvions, locally called *palandas*, have not been settled like ordinary raiyati lands, but have been settled by public auction for a term of three years, like other miscellaneous sources of income. This has been done in accordance with the practice followed in the adjoining estate of Kujang and with the sanction of the Commissioner conveyed in his No. 538W., dated 1st August 1893. According to the Tenancy Act, these *palandas* will be regarded as raiyati and not as demesne lands, and they may hereafter be settled, when they are fit for cultivation, with tenants for suitable rents. The following statement shows details of *palandas* :—

Name of Elakah.	Area in acres.	Amount of rent.	REMARKS.
1	2	3	4
		Rs. A. P.	
Chhamuka ...	105.85	90 13 0	
Panchmuka ...	5.53	4 0 0	
Kerara ...	29.67	54 0 0	
Total ...	141.05	157 13 0	

277. Formerly the miscellaneous sources of income used to be settled, either by private arrangement or by public auction, for the same term as rents for raiyati lands, but they are now settled, as directed by the Collector in his No. 1413W., dated the 1st September 1890, for a term of three years only. As there is considerable room for their development, and as, from time to time, necessity arises for making new and fresh provisions for safeguarding the interests of the public or the subordinate persons, a short term of settlement is, for the present, advisable. At the present settlement a few suitable conditions have been inserted in the leases for the miscellaneous rights (the forms for which have been sanctioned by the Board), requiring the lessees to follow the prescribed scale of fees and schedule of rates in making collection, and to submit, once a year, their system and account of collections. In the leases for the fisheries, a schedule of rates has been attached prescribing the charge for each kind of net; in those for pasture, the charge for each buffalo is fixed; in those of forests, a scale of fees leviable is prescribed; in those of markets, a schedule of fees for all articles usually sold in them is appended, and in those of ferries, a scale of rates, such as is prescribed for public ferries, has been incorporated. The provisions already made may, in course of time, be found, some unnecessary and some insufficient, and a short term of settlement will allow of necessary alterations being made, from time to time, as may seem expedient.

CHAPTER IV.

RESULTS OF PRESENT SETTLEMENT COMPARATIVELY SUMMED UP. .

Total area and rent demand comparatively shown in one statement.

378. The following statement shows the total area and rent demand of the estate according to the present and the last settlement:—

PART IV.
CHAP. IV.

Number.	How held.	ACCORDING TO PRESENT SETTLEMENT.					ACCORDING TO LAST SETTLEMENT.*		REMARKS.
		No. of holding.	Area in acres.	Average area per holding.	Rent.	Average rent per acre.	Area.†	Rent.	
1	2	3	4	5	6	7	8	9	10
1	By Government ...	24	188'57	8'27	...	...	188'00	...	
2	By District Board, Cuttack.	9	30'28	3'37	...	...	30'00	...	
3	By District Board, Balasore.	13	68'39	5'27	...	...	150'18	...	
4	By the Raja's mother ...	2	46'57‡	23'78	...	...	51'45	...	
5	By the Raja's mother ...	10	42'77	4'27	148 8 0	1 9 9	104'06	136 9 7	
6	By permanent tenure-holders—								
	As rent-free ...	2,095	7,448'89	3'59	...	...	9,477'85	...	
	As <i>tondi</i> at fixed rents.	1,706	6,325'08	3'72	2,739 14 0	0 6 10	6,740'08	2,739 14 0	
	As <i>bajyati</i> ...	645	5,089'84	6'42	2,995 8 0	1 1 3	5,143'08	2,623 14 5	
7	By jungle reclamation tenure-holders.	5	1,044'17	208'35	677 4 0	0 10 4	707'05	244 7 0	
8	By the holders of service lands—								
	As rent-free ...	243	263'01	1'00	...	...	287'33	...	
	As <i>tondi</i> ...	106	320'47	3 2	162 13 3	0 4 2	451'10	162 13 3	
	As <i>bajyati</i> ...	123	401'14	3'29	550 6 0	1 1 11	471'23	446 8 2	
9	By the <i>raiyats</i> under the proprietor—								
	(1) Settled <i>raiyats</i> .								
	(a) Thanl ...	11,773	68,000'11	5'35	77,493 8 0	1 3 8	68,440'30	69,714 13 7	
	(b) Chandna ...	1,032	244'43	0'24	711 14 0	2 13 11	210'87	685 11 8	
	(2) Occupancy <i>raiyats</i> .								
	(a) Resident ...	10,948	35,703'08	3'26	40,822 6 0	1 3 2	31,410'34	35,161 11 5	
	(b) Non-resident ...	650	2,719'03	4'18	2,942 10 0	1 1 3	2,516'53	2,274 12 6	
	(3) Non-occupancy <i>raiyats</i> .								
	(a) Resident ...	1,606	5,933'13	3'70	5,545 8 0	0 14 10	1,781'54	1,390 15 6	
	(b) Non-resident ...	63	250'99	3'83	231 10 0	1 0 7	40'27	311 14 3	
	Total ...	30,980	129,221'33	...	1,36,063 14 0	...	116,277'05	1,12,083 11 6	
10	§ Miscellaneous under—								
	(1) Fisheries ...	...	20,625'92	...	9,545 8 0	...	23,044'98	3,194 0 0	
	(2) Forest pasture ...	...	30,480'00	...	925 0 0	...	30,000'00	675 13 8	
	(3) Bankar (forests) ...	...	70,053'70	...	4,800 0 0	...	177,051'90	1,503 0 0	
	(4) Palkar (fruits) ...	...	194'16	...	375 8 0	...	130'50	154 10 11	
	(5) Nalukar (weeds) ...	...	...	...	148 0 0	...	...	87 0 0	
	(6) Mahu-mohan (honey and wax) ...	...	...	...	375 0 0	...	...	334 0 0	
	(7) Markets ...	...	...	...	390 0 0	...	...	165 0 0	
	(8) Ferries ...	...	...	...	978 0 0	...	...	78 8 9	
	(9) Palandas ...	...	141'03	...	127 13 0	...	...	...
	Total ...	...	121,01 6'73	...	16,425 3 0	...	231,132'26	5,142 12 5	
11	Rajasthar unassumed, including roads, embankments, tanks, irrigation channels, creeks, buildings, village pasture, &c.	...	22,540'24	...	...	...	24,947'20	845 9 3	The land charged to this rent has gone out of cultivation since 1885.
	GRAND TOTAL ...	30,980	221,478'40	...	1,43,488 0 0	...	402,227'74	1,19,401 1 2	
	§ <i>Raiyats</i> under tenure-holders Nos. 6 and 7—								
	(a) Settled ...	2,137	2,523'29	...	...	...	...	...
	(b) Occupancy ...	844	1,450'25	...	...	...	...	...
	(c) Non-occupancy ...	928	761'28	...	...	...	...	...
	Under <i>raiyats</i> under <i>raiyats</i> and holders of service lands.	2,159	2,442'82	...	...	...	...	...

* Number of holdings and average rent per acre, according to last settlement, have not, for want of space, been given. The holdings at the last settlement were somewhat differently arranged than they have been this time, and the average rate per acre is more at this settlement than it was at the last, as will be explained later on.

† 53 acres for the last settlement are shown in acres after making an allowance of 16% per cent. for present chain measurement.

‡ This does not include *khajur* lands, as explained in paragraph 255 above.

§ The areas under miscellaneous are of course approximate and liable to vary from year to year as cultivation extends.

¶ *Raiyats* under tenure-holders have been shown separately, as rents have not been recorded for them and as they were regarded until recently as under-*raiyats*.

Note.—Statements in suitable form are being prepared showing details of land held by (1) Government; (2) District Board, Cuttack; (3) District Board, Balasore; (4) Estate, under buildings, roads, &c.; (5) Raja; (6) Rani; the tenure-holders of (7) Debtor; (8) Piroter; (9) Brahman; (10) Khairat; (11) Khusha; (12) Melak; (13) Estate servants; (14) Superior servants of the Raja; (15) Private servants of the Raja family; and (16) Village servants. These statements, which will be voluminous, are not considered necessary to be submitted with this report, but they will be attached to the Uruga copy of the report now being fair copied.

PART IV
CHAP. IV.

279. The net increase in the rent-roll of the estate by the present settlement, has been Rs. 33,037-14-10, and of this increase, Rs. 10,452-5-7 is on account of the re-settlement of the miscellaneous sources of income.

These sources having been settled by an open public auction, the increase in the income from them has been due to the voluntary action of the people themselves.

There has been considerable increase in the rent from the fisheries, the forests and the ferries. The river fisheries, which were settled at the last settlement for Rs. 2,400, have now been taken up for Rs. 6,825, and there is no difficulty in realizing the amount. On the whole, the income from the miscellaneous sources has been trebled within the last five years.

280. The net increase from land settlement has been Rs. 22,585-9-3.

Increase from land settlement
accounted for

From the statement above, it will be seen that there has been some increase from the settlement of resumed lands and jungle reclamation tenures, but chiefly from that of ordinary raiyati lands. The total increase from resumed lands is Rs. 1,404-7-5, part of which is due to the fresh resumption of some 500 acres of rent-free and *tonki* lands, and part to the application of higher rates. The usual rule regarding the assessment of resumed lands is that when they are resumed they are at first lightly assessed and are gradually fully assessed; but, for reasons explained in paragraph 228 above, they have been assessed at the lowest sanctioned village rates which are higher than the especial rates at which they were settled at the settlement of 1865-71.

The increase from the settlement of jungle reclamation tenures has been Rs. 332-12-7, and it is partly due to increase in area by 337·12 acres and partly to enhanced rates, the tenures having been settled before at very low rates. The increase from the settlement of raiyati lands has been Rs. 21,678-9-1. This increase is principally due to the increased area under cultivation now brought under settlement. The net increase in area, after allowance for close measurement, has been 13,475·09 acres, and the increase in rent, on account of this extension, has been Rs. 16,001-9, or 72 per cent. of the total increase from the settlement of raiyati lands. The rest of the increase, viz. Rs. 4,846-12-3, is accounted for as follows:—

- (1) The old *laik padia* or culturable waste, settled at the last settlement at very low rates, having been assessed, at the present settlement, at ordinary raiyati rates, the waste lands having been fully cultivated, there has been some increase, which is roughly estimated at Rs. 2,000;
- (2) The jungle reclaimed lands were, at the last settlement, settled at the favourable rates of annas 3 to 5 an acre, and they have this time been assessed at the ordinary rates sanctioned for jungle reclaimed villages, viz., annas 8, 10 and 12 an acre, and the increase due to this cause amounts to Rs. 1,404-6; and
- (3) For some 18 villages of Elakah Kerara, rates were temporarily reduced at the settlement of 1880—82, the protective embankments at the time having gone out of repairs. This embankment has, however, since some years been properly repaired and maintained, and the rates originally fixed in the settlement of 1865—71 have, with the Board's sanction, been restored, and the resulting increase due to this restoration of old rates has been Rs. 806-12.

The balance of the increase, viz. Rs. 635-10-3, is due to causes which cannot be traced in detail. The maintenance of the existing rents in cases where the present areas of holdings being less than the old, the application of the sanctioned rates resulted in unjustifiable decrease of existing rents, and the difference of the systems of measurement adopted at the present and the last settlement may generally be said to be the causes of this increase.

In the following statement the causes of the increase of rental from land settlement are briefly shown:

PART IV.
CHAP. V.

Cause.	Amount of increase.	REMARKS.
1	2	3
	Ra. A. P.	
Extension of cultivation ...	16,001 9 0	
Assessment of old culturable waste land now under cultivation.	2,000 0 0	
Assessment of jungle reclaimed land at higher sanctioned rates.	1,404 6 0	
Restoration of old rates for 18 villages the rates of which were temporarily reduced in 1880.	806 12 0	
Assessment of resumed lands ...	1,404 7 5	
Assessment of jungle reclaimed tenures.	332 12 7	
Other causes	635 10 3	
Total ...	22,585 9 3	

CHAPTER V.

COST OF OPERATIONS.

281. The cost of survey operations paid by the estate has amounted to Rs. 60,174-2-4, as detailed below:—

Cost of survey.

Year in which payment was made.	On what account.	Amount.	REMARK
1	2	3	4
		Ra. A. P.	
1888-89 ...	(1) Cost of trijunction stones ...	240 0 0	
1889-90 ...	(2) " survey forms ...	117 9 4	
	(3) " traverse survey ...	7,093 0 0	
1890-91 ...	(4) " survey forms ...	727 4 0	
	(5) " cadastral survey ...	339 1 9	
	(6) " trijunction stones ...	481 3 0	
1891-92 ...	(7) " forms ...	243 8 0	
	(8) " cadastral survey ...	25,059 4 3	
	(9) " Ditto ...	23,480 0 0	
1892-93 ...	(10) Ditto ...	708 0 0	
1893-94 ...	(11) Ditto ...	131 0 0	
	(12) Cost of badar corrections ...	161 14 9	
	(13) " boundary stones ...	195 13 3	
1894-95 ...	(14) " badar corrections ..	287 8 0	
	Total ...	60,174 2 4	

A sum of Rs. 10,950 has been paid by Government on account of traverse survey, and the total cost of survey is thus Rs. 71,124-2-4,* which gives an average of—

Ra. 161-10-4 per square mile on the total area of the estate;
 Ra. 255-13-6 " " " on area cadastrally surveyed;
 Ra. 0-4-0 per acre on the total area; and an average of
 Ra. 0-6-4 " " on the area cadastrally surveyed.

* The cost according to survey return is Rs. 68,000-6, and the difference of Rs. 2,454-13-4 is due to the items numbered (1), (2), (4), (6), (8), (12), (13) & (14) not having been taken in the Survey Department accounts.

PART IV.
CHAP. V.

Excluding the amount of Government contribution, the average cost incurred by the estate is—

Rs. 136-12-1 per square mile on its total area ;
Rs. 216-7-3 " " " on its cadastrally surveyed area ;
Re. 0-3-5 per acre on its total area, and
Re. 0-5-4 per acre on its cadastrally surveyed area.

282. The total amount spent on survey work is shown in detail as follows:—

Particulars.	Amount.	REMARKS.
1	2	3
	Rs. A. P.	
1. Cost of marking (1) stations, Rs. 2,403-0-11, and (2) tri-junctions, Rs. 917-0-3.	3,320 1 2	
2. Cost of traverse survey ...	16,542 7 3	
3. " cadastral survey ...	19,365 5 2	
4. " training local agency ...	1,068 2 0	
5. " khamapuri in field and statistics.	9,919 0 0	
6. Cost of preparation of records, abstracts, traces, extractions of areas, completion of maps and other miscellaneous office work in the Survey office.	20,459 12 0	
7. Cost of badar corrections ...	449 6 9	
Total ...	71,124 2 4	

283. Mr. Datta, as already remarked, was in charge of the settlement from 1st February 1890 to 14th May 1891, and during this period he spent Rs. 8,092-13-4, as detailed below:—*

Particulars.	Amount.	REMARKS.
1	2	3
	Rs. A. P.	
1. Salary of Settlement Officer ...	3,862 14 5	
2. " office establishment ...	986 4 3	
3. " attestation establishment ...	1,251 0 6	
4. " assessment " ...	847 2 10	
5. Travelling allowance ...	453 0 0	
6. Contingencies—		
Cost of stationery ...	181 1 6	
" survey instruments ...	16 8 0	
" furniture ...	93 0 0	
Office contingencies ...	141 4 3	
	481 13 9	
7. Allowance of Collectorate Settlement clerk ...	200 9 7	
8. Cost of office accommodation ...	60 0 0	
Total ...	8,092 13 4	

* The cost incurred by Mr. Datta is separately shown as his work has come under my revision.

284. The cost of settlement during the period, 15th May 1891 to 31st March 1894, amounts to Rs. 11,885-11-11,* as detailed below :—

Particulars.	Amount.	REMARKS.
1	2	3
1. Salary of office establishment	Ra. A. P. 2,312 1 8	
2. Cost of preparation of rate statements	243 3 2	
3. " attestation	2,803 6 7	
4. " assessment	719 10 9	
5. " preparation of comparative ekpadyas	517 12 3	
6. " preparation of badars	524 5 2	
7. Travelling allowances	2,234 0 0	
8. Contingencies—		
Cost of tents and pals (including freight &c.)	Ra. A. P. 699 2 6	
Cost of forms	828 13 0	
" stationery	196 6 0	
" furniture	27 13 6	
Office contingencies	233 12 9	
9. Allowance to Settlement clerk, Collectorate	1,985 15 9 545 4 7	
Total	11,885 11 11	

Cost incurred and to be incurred since March 1894 for finally winding up settlement operations.

285. The cost of work remaining on the 31st March 1894 to be done to close up the settlement operations, is shown in detail in the following statement:—†

Nature of work.	Budget allotment.	Amount spent up to 30th November 1894.	Balance available.	REMARKS.
1	2	3	4	5
1. Cess jamabandi	Ra. A. P. 150 0 0	Ra. A. P. 150 0 0	Ra. A. P. ...	Work finished.
2. Filling up of hukum-namas.	200 0 0	200 0 0	...	Ditto.
3. Re-arrangement of khatians.	100 0 0	100 0 0	...	Ditto.
4. Examination and classification of attestation files.	200 0 0	200 0 0	...	Ditto.
5. Compilation of statistics	400 0 0	400 0 0	...	Ditto.
6. Preparation of index map.	125 0 0	125 0 0	...	Work done by the Survey office, but charge debited to settlement.

* This amount does not include the pay of establishment for March 1894, which, having been paid in April 1894, has been included in the estimates for 1894-95.

† The costs, since March 1894, have been separately shown, as the estimates for 1894-95 have not yet been formally sanctioned, and as all the estimated amounts are not likely to be spent before this report is submitted. In the estimate sent up with this office No. 63, dated 8th August 1894, Rs. 777-12 provided under item 7 (actuals for three months, March to May) included cost of cess jamabandi Rs. 150, of compilation of statistics Rs. 400, of office establishment Rs. 179, and of allowance to Collector's Settlement clerk Rs. 48-12.

Note.—Sanction to the estimates for 1894-95 has been received on the 5th December 1894.

PART IV.
CHAP. V.

Nature of work.	Budget allotment.	Amount spent up to 30th November 1894.	Balance available.	REMARKS.
1	2	3	4	5
	Rs. A. P.	Rs. A. P.	Rs. A. P.	
7. Correction of khasras	500 0 0	500 0 0	...	Work finished.
8. Copying the above ...	500 0 0	...	500 0 0	
9. Comparing the above ...	300 0 0	...	300 0 0	
10. Preparation of two sets of abstracts for the khasras (two copies).	200 0 0	...	200 0 0	This work is in abeyance, pending receipt of sanction. Only one set will be prepared, the cost of which will be Rs. 100, and there will be a saving of Rs. 100.
11. Preparation of detailed jamabandi ekpadyas or rent-roll.	300 0 0	300 0 0	...	To be prepared by the Survey office. Only one set of traces of jungle blocks will be prepared for the Collector's office.
12. Preparation of two copies of the above.	500 0 0	...	500 0 0	In abeyance, pending receipt of sanction.
13. Two copies of traces of village maps and jungle blocks.	1,210 0 0	...	1,210 0 0	
14. Preparation of khatian terijes.	100 0 0	...	100 0 0	
15. Office establishment* ...	587 8 0	587 8 0	...	Work finished.
16. Miscellaneous, including copying from manuscript forms to printed forms.	100 0 0	100 0 0	...	
17. Binding records ...	525 0 0	...	525 0 0	
18. Allowance to Settlement clerk, Collectorate.	146 4 0	146 4 0	...	
19. Travelling allowances	500 0 0	253 4 0	246 12 0	
20. Contingencies, including cost of printing forms.	460 12 0	262 12 2	197 15 10	
Total ...	7,104 8 0	3,324 12 2	3,779 11 10	

The total estimated cost of the final winding up of settlement is as shown, Rs. 7,104-8. Out of this amount, Rs. 100 will be saved from item (10), some Rs. 200 from items (13), (19) and (20), and possibly small amounts from other items not already spent, and the total amount on account of savings will probably be Rs. 300, and the actual cost is therefore estimated to be Rs. 6,804-8.

286. I have been in charge of settlement in addition to my duties as Manager from 3rd July 1891 up to date, and I have drawn my pay as Manager of the estate, no especial allowance for settlement having been made to me. To relieve me of the routine work of management, an Assistant Manager was appointed, and he continued in office from 28th July 1891 to 18th January 1894, and drew in the whole period of his service, as salary (including pension contribution), a sum of Rs. 6,959-7-2. Nothing has yet been decided as to whether his salary or a portion of mine is to be debited to settlement. I raised this question in my first estimate of costs sent up in July 1891, but no definite instructions have been

* This includes actual cost for three months, March to May, and estimated cost for six months, June to November.

received. Something has to be debited to settlement I have no doubt, and as the Assistant Manager's deputation to the estate was solely in consequence of my having to do settlement, the whole of his salary should be so debited, and the sum of Rs. 6,959-7-2 is therefore added to the cost of settlement operations.

PART IV.
CHAP. V.

Total cost of settlement operations. 287. The total cost of settlement operations is—

		Rs.	A.	P.
Spent by Mr. Datta	...	8,092	13	4
" me	...	18,690	3	11
Salary of Assistant Manager	...	6,959	7	2
Total	...	33,742	8	5

This total cost, by rare coincidence, is almost equal to the not increase in the rental of the estate, which has resulted from the present settlement and gives an average of—

		Rs.	A.	P.
On the total area of the estate	... { Per square mile ...	76	11	0
	... { Per acre ...	0	1	11
On area* cadastrally surveyed	... { Per square mile ...	121	6	
	... { Per acre ...	0	3	0

Excluding the amount spent by Mr. Datta, whose work has had to be revised, the net cost of operations is Rs. 25,649-11-1, which gives an average of—

		Rs.	A.	P.
On total area of the estate	... { Per square mile ...	58	4	9
	... { Per acre ...	0	1	6
On area cadastrally surveyed	... { Per square mile ...	92	4	3
	... { Per acre ...	0	2	3

The cost of settlement, looking at it from any point of view, is moderate.

288. The total cost of survey being Rs. 71,124-2-4 and that of settlement being Rs. 33,742-8-5, the cost for both survey and settlement is Rs. 1,04,866-10-9.

This gives an average of—

		Rs.	A.	P.
On the total area of the estate	... { Per square mile ...	238	5	4
	... { Per acre ...	0	5	11
On area cadastrally surveyed	... { Per square mile ...	377	3	6
	... { Per acre ...	0	9	4

Excluding the amount of Government contribution, the actual cost to the estate for survey and settlement is Rs. 93,916-10-9, which gives an average of—

		Rs.	A.	P.
On the total area of the estate	... { Per square mile ...	213	7	1
	... { Per acre ...	0	5	4
On area cadastrally surveyed	... { Per square mile ...	337	13	3
	... { Per acre ...	0	8	4

* The total area of the estate is 439.31 square miles and 231,478 acres, and the area cadastrally surveyed is 277.8 square miles and 177,839 acres.

Part V.

Miscellaneous.

CHAPTER I.

PUBLIC WORKS.

289. It is now generally admitted that the construction of embankments is at least of doubtful utility, and the mischief that such works, in exceptional years, cause is not fully compensated by the protection afforded to crops in years of moderate floods. The case of Orissa, however, is peculiar. The five rivers, the Brahmani, the Baitarni, the Salandi, the Mahanadi, and the Subarnarekha (the first three flood this estate) "whose total discharge dwindles to 1,690 cubic feet of water per second in the month of May, dash down 2,760,000* cubic feet of water per second in their floods," and this immense volume of water, spread over a comparatively small deltaic area, necessarily causes, in exceptional years, a great deal of devastation. From time immemorial, attempts have been made to embank rivers, and this has, while affording temporary protection, resulted in permanent harm.

Flood embankments do more harm than good.

During their rapid course, the rivers contain a vast quantity of suspended silt brought down from the hills, and on reaching the deltaic levels, the force of the currents being slackened, they follow a meandering course in the plains, and the silt, which can no longer remain suspended in water, is deposited. When the rivers are embanked, the flood water is necessarily confined within narrow channels, and the suspended silt is deposited in the beds and on the banks of rivers which, in course of time, rise higher than the level of the protected areas, and the natural consequence of this futile attempt to control water is, that in years of unusual floods, when embankments are breached and the country is flooded, flood water lodges in the protected areas, causing therein a great deal of damage and destruction. If embankments had never existed, flood water would have spread over the whole country, depositing its silt all over, and not risen, in ordinary years, high enough to do much damage. Floods would take place, more or less destructive, embankments or no embankments; but with embankments, people are in fancied security and are unprepared to meet destructive floods. With no embankments, they would have got used to floods and accommodated themselves to the altered state of things. They would have taken to growing an early variety of rice, which might be reaped before the floods set in, or a long-stemmed variety of that crop, which, I understand, is grown in East Bengal, or the rabi crop which could be successfully grown on land in receipt of annual deposit of silt. In any case, the increase of population would have been kept within the normal supply of food, and the untold sufferings and hardships resulting from severe floods in exceptional years, would have been prevented.

290. The Kanika estate has had, from olden times, its river embankments, as elsewhere in Orissa, and the protected areas are now found to be catchment basins, from which the flood water, if once in, cannot be readily dislodged. There are three embankments of this kind, one of which is on the right bank of the Brahmani, from Bhandpara to Angaroota in Elakah Kerara, and is six miles long. This is connected with the Government *bund* of Utikan. It protects a large number of villages of Zillas Balikona and Noorgaon, and all these villages are now of lower level than the bank of the river, and on the occurrence of unusual floods, when it is breached, as sometimes it is bound to be, the consequences are serious. The soil in these Zillas is subjected to gradual exhaustion, and is deprived of the fertility which the deposit of silt, if flooded, would have given it.

The next river embankment is ten miles long and lies in Elakah Chhamuka, on the left bank of the river Kharsooa, from Chhadash near Ganja to Ayeton.

The river Kharsooá is subject to floods, and almost every year it overflows its banks, and to protect the villages of Mukas Ganja, Aria, Ay... embankment is maintained. Here, too, the level of the protected area has remained stationary, while the banks and the beds of the river have gradually risen, and in years of heavy floods the country is flooded, and water lodges in fields longer than would have been the case if the embankment had never been made.

There was one embankment more, but it is no longer kept up. It was in Panchmuka, from Chasakhand to Nooagáon and from Nooagáon to Subudhia. The remains of this *bund* are still an obstruction to the free discharge of water. The protected area is, as elsewhere, lower than the outside country, and when once flood water gets in, which, however, it does not do every year, it lodges in the villages of Mukas Kangardih and Jasipur, and is not easily discharged into the river, there being only one small outlet for the discharge of an enormous volume of water. All these three embankments have been in existence from very olden times. They have, several times before this, been more or less damaged or destroyed and as often repaired. They have seldom been of any practical use at times when their need was urgent, and in ordinary years they are not much needed. If these embankments could afford absolute protection in all cases, the large outlay on their construction and maintenance could be considered remunerative; but they nearly always fail when our need for them is greatest, and it would be better to do away with such unreliable works. This, however, cannot be done for one estate while embankments are kept up in other parts of the province.

291. Besides these three flood embankments, one of which has already been

Salt water *bunds* and refuges. given up, there are several *nona bunds*, affording protection against the inrush of salt water during high tides and storms, and the objections which exist against the former are not applicable to the latter. The following statement shows the *bunds* now maintained and those which should be constructed for the protection of the areas now under cultivation :—

BUNDS ALREADY CONSTRUCTED.			BUNDS WANTED.		
No.	Name.	Miles.	No.	Name.	Miles.
1	2	3	4	5	6
1	Rajanagar to Gadadharpur ...	17	1	Bansmul to Rajnagar ...	6
2	Angarooá to Barpali ...	12	2	Righagarh to Kamalpur ...	4
3	Gopinathpur to Satbhaya ...	7	3	Isawarpur to Bandhamál ...	7
4	Deuli to Isawarpur ...	3½	4	Dakshindhamra to Bejoypatna ...	12
5	Baraharipur to Tilanchi ...	12			
6	Dakshindhamra to Bansara ...	6			

All the six *nona bunds* now in existence are of moderate height, four to six feet, and afford no protection during cyclones against sea waves which sometimes rise to 15 feet and come sweeping the country. Against such waves, which are of unusual occurrence, *bunds* can be no protection. Large areas cannot be enclosed, as the outlay required would be disproportionately high and beyond the means of the estate. What can and should be done is, as the Board were pleased to observe on my first settlement proposals, to embank clusters of villages in places which are particularly exposed to suffer from sea-waves. There are two places peculiarly suited for the construction of such refuges, and they are Muka Saraswati in Panchmuka, and Zillas Gajaraipur and Garmál in Kaladwip. The former was, it appears, from the settlement *royddé* of 1845, visited by storm-waves some time before that year, and all the houses and all the inhabitants were completely swept away. Since then the tract has not been inhabited, except in one place, though the cultivated area of this Muka is 7,045-61. This place is eminently suited for the trial of an experimental refuge for the protection of human and animal lives.

PART V.
CHAP. I.

The villages of Zillas Gajarajpur and Garmál were affected in the cyclone of 1885, when the storm-waves passed over all the villages comprised in them, washing away houses, human beings and animals. The waves, it is reported, rose 15 feet high, and even trees were submerged. This place should have a refuge in order to protect the few important villages which have now been fully peopled. For these works, a fuller report will be submitted later for necessary sanction. At this place a brief mention has only been made.

292. In 1884-85 the question of the construction of a sea-dyke for the protection of Mukas Jagoola and Saraswati was considered; but the estimated cost being Rs. 2,26,340

Sea-dykes.

according to one estimate, and Rs. 1,68,125 according to another, the project was postponed until sufficient funds were available for its being carried out without stoppage or delay. The cost is prohibitive, and the work is not, in my opinion, very necessary. I have recommended the construction of a comparatively inexpensive *bund* such as used to be maintained in the Raja's time. Half of the *bund*, from Bejoypatna to Kaithakolhá, is in existence, and in this part only a few breaches will have to be filled up and some repairs to be done. The other half has altogether disappeared and will have to be renewed. This *bund* will be a sufficient protection against the inrush of sea water during high tides and moderate storms, and with the refuge mentioned above, will meet all requirements for some time to come. The whole of these two Mukas cannot be protected against the fury of the sea in times of severe storms and cyclones, and it would be enough to save human lives and animals. The land, if flooded with salt water once in ten years or so, will not suffer any lasting damage, and anyhow, the cost of a sea-dyke of sufficient height being prohibitive, the project has, for the present, to be postponed.

There is, however, one place in the estate where I think a sea-dyke is really necessary. The sea-shore in the south is flanked by sand hills which are natural barriers against the encroachments of the sea. They are, however, gradually disappearing, and within living memory, the sea has swallowed about a mile of them. The seat of the Kaladwip Raja, called *Kaladwip-garh*, is now partly in the bosom of the sea. If these natural barriers were once entirely gone, it seems probable a considerable slice of the estate would at once be absorbed, and the inward progress of the sea there would then be nothing to prevent. The present width of the sand hills is, on an average, about half a mile, and it will take some time to be washed away. There is thus no immediate fear, but it is time the place were professionally inspected, and if a sea-dyke were considered necessary, the same were made. As a layman I can merely suggest.

293. A description of the roads maintained by the District Boards has been given in paragraph 18 above, where it has been shown that the estate does not get from them

Roads.

what it might fairly expect in return for the Rs. 7,042 paid on account of cesses. The estate consists almost entirely of low clay land, which remains submerged under water, more or less, during the rains. There are a few sandy stretches which, however, are not connected with one another, and village roads in this estate are much needed. Within the last two years, when funds became available, some attempt has been made in this direction, and the roads which have been constructed, have been shown in paragraph 14 above. There are still many roads urgently wanted, and a few of the important ones are noted below:—

- | | | |
|---------------------------|---------|---|
| 1. Rajnagar to Chinchiri | 7 miles | The whole country this side is inaccessible, and a road is wanted to connect the villages of Goje and Satbhaya Zillas with Rajnagar and other places this side. |
| 2. Ganja to Righagarh | ... 10 | To open out the interior of Ohhamuka subdivision and to connect Dangmal, Bajarpur and Bararia Mukas with Ganja. |
| 3. Taras to Douli | ... 2 " | |
| 4. Kalikapur to Bandhamal | ... 6 " | To connect the villages of Singri, Ghariyamal and Ayeton Mukas with head-quarters. |

5. Matto to Jagoola	10 miles	...	To connect the villages of Jagoola and Chardia Mukas with Matto sub-tahail outcherry.
6. Paramanandapur to Manipur	4 "	...	To connect Ghanteswar inspection bungalow with Matto outcherry.
7. Manipur to Panchtikri	4 "	...	To connect Saraswati Mukas with Ghanteswar Hât.
8. Ohinchiri to sea-coast (Satbhaya)	2 "	...	To connect Satbhaya villages with Kaladwip.
9. Rajnagar to Hansina ghat	7 "	...	To enable people from the southern Elakabs to come to head-quarters.

294. The question of water-supply, as already remarked in paragraph 72 above, is a difficult one for this estate. In its sandy tracts, which are limited in number and extent, it is possible to sink masonry wells, and a few such wells have of late been constructed in suitable places in the interior. There are now three wells at Ganja, one at Rajnagar, one at Satbhaya, one at Dakshindhamra, and one at Ghanteswar Hât; and a few more can be sunk in the following villages, viz., Gira, Keraragarh, Penth, Rajgarh, Balikona, Matto, Chardia, Bansara and other similar sandy tracts. In the clayey plains, wells, if constructed, yield only brackish water. Some 19 wells were constructed in 1886-87 in Elakabs Kerara and Kaladwip, and not one of them yielded drinkable water. In most parts of the estate there are thus only tanks, and some fifty new ones have of late been excavated; but this source of supply is not to be generally depended on. Tanks in this estate have to be shallow, as, if they are dug deep, the water is found to be brackish, and shallow tanks all dry up if there is deficiency of rainfall or excessive heat in any year. During attestation in 1892, when I was camping about from place to place, there were, in the whole of the interior of Elakabs Kerara, Kaladwip and Chhamuka, only two tanks with water in tolerable condition; all the others had either dried up or their water had become rotten green, and the people were drawing their unwholesome water-supply from holes dug into the beds of ponds. The tank source thus failing, the difficulty of supplying most parts of the interior of the estate with wholesome water for human beings, and particularly for the dumb domestic animals, remains unsolved.

295. There are, as stated in paragraph 16 above, great many creeks all over the estate, forming in fact the most important physical feature of it, and they may be utilized for solving its water difficulty. They are numerous, deep, and some of them of considerable length, and, in my opinion, eminently suited for storing rain water. Providence gives plenty of wholesome fresh water every year, and nature has formed deep creeks, and all that man has to do is to appropriate these natural advantages to his own use. The easiest way to do this would obviously be to close up the mouths of the creeks and thus to prevent the escape of rain water from them. But this would cause the creeks to silt up and cease to be creeks. What is wanted is to have masonry sluices, built some distance inland, with closeable openings at bottom, so that during the rains, when water is not wanted, the sluice gates might remain open and admit of tide water passing and repassing as usual, and also let out flood or excess water, if any, and in the dry weather the beds might admit of being cleaned and deepened, if necessary. The gates would, however, have to be closed some time between September and November, so that, taking advantage of a spring tide, water might be retained in the creeks up to their brink, but below the level of the paddy-fields. As the creeks are usually several miles long, they would serve as reservoirs of water to all the surrounding villages and do immense good to their thirsty cattle. The creeks closed by sluice gates, as suggested above, will, it is believed, retain sufficient fresh water for all domestic requirements. There is often some rainfall between September and June, and this rainfall will, to some extent, help to replenish the creeks from time to time and keep up the supply of water in them.

The scheme suggested above is, of course, a mere speculation, and it cannot with confidence be asserted how far it would succeed and realize the advantages

PART V. anticipated from it. As an experiment, one or two creeks might at first be tried,
CHAP. I. and on the results of this trial further action would, of course, be decided upon.

296. At the head-quarters we have now several masonry buildings of late constructed, and they are kept in proper repairs.
 Buildings. They are:—

1. The cutcherry house, with five rooms of good size, providing ample accommodation for records and all other requirements;
2. The Manager's bungalow, fairly comfortable, having three rooms with pukka out-offices and compound wall;
3. The school building, now utilized as a Sanskrit tol;
4. The dispensary building, a fine house with two rooms;
5. The Hospital Assistant's pukka quarters, close to the dispensary;
6. The inspection bungalow, an unpretending small house with pukka out-offices attached;
7. The amla's quarters, accommodating four muharrirs;
8. The clerks' married quarters, with two rooms and enclosure walls, accommodating two families; and
9. The chaprasis' quarters, with six rooms attached to the cutcherry building.

Besides these buildings at the head-quarters, an inspection bungalow has been built at Satbhaya, which is a seaside place, and another is in course of construction at Ghanteswar. A few more bungalows are wanted in the different parts of the estate, such as one at Keraragarh, and one at Rajnagar in Elakah Kerara; one at Penth in Elakah Kaladwip; one at Isswarpur and one at Tarpada in Elakah Chhamuka, and one at Matto and another at Sarna in Elakah Panchmuka.

A palace in the estate for the Raja is also wanted, and its construction will, I fancy, be taken in hand at an early date.

297. The present establishment for the supervision of the public and the estate works constructed and maintained in the
 Public works establishment. estate, consists of—

			Rs.
One daroga on	...	...	30 a month.
One muharrir on	...	...	18 "
Two peons at Rs. 6 each	...	...	12 "
Total			60 or Rs. 720 a year.

The above establishment is exclusively for this estate. The District Engineer, Cuttack, is Engineer for this estate too, by which he is paid about Rs. 82 a month, and under his supervision all the works are executed. The total yearly cost of supervision is Rs. 984 + 720 = 1,704. The outlay on works is generally Rs. 15,000 a year, and the cost of supervision is therefore 11·3 per cent. of the outlay.

At a comparatively small allowance the estate gets the benefit of the District Engineer's supervision, and Mr. Desgratoulet, the present District Engineer, is always anxious to make his supervision as efficient as he possibly can. But he is servant of more than one master, and the evil of this arrangement is what it is bound to be elsewhere. He is primarily the servant of the District Board and only secondarily that of this and other estates, and he is bound to devote nearly all his time to the Board's works, and the Ward's estates can expect only such attention as he can spare. I am sorry to have to point out this unsatisfactory feature of the present arrangement, but I do so only because the interests involved are of much importance. The present resettlement has resulted in an increase of rental to the extent of over Rs. 33,000, and from the old rental we were spending about Rs. 15,000 on public works, and if the whole or a fair portion of the present increase is devoted to them, the outlay to be annually laid out on public works might amount to Rs. 35,000 to Rs. 40,000. There is certainly much room for expenditure in this direction, and it therefore behoves me to point out what is wanting in the way of supervision.

I am not inclined to recommend that the District Engineer's connection with the estate may be severed. Far from it. I have worked with him these seven years and worked without any the least hitch or friction. The estate is indeed fortunate in having him to supervise its work; but what I wish to suggest is that the time which he may be expected to spend in the estate may be fixed, so that he may be able to devote a fixed number of days, not only to checking measurements, but to professionally inspecting the different parts of the estate, with a view to see what public works are wanted for the benefit of it. In the foregoing paragraphs the construction of several works have been suggested, but a professional inspection is necessary to see if the *bunds* indicated, the sea-dyke suggested, the refuges recommended, the several roads named and the bungalows proposed, are works necessary for the estate, and where and how are they to be executed. If the scheme for storing rain water in the creeks is at all a practicable scheme, the selection of suitable ones should be made by a professional Engineer. The Manager being a layman cannot well interfere in matters professional, as he would very likely be told "you don't know."

The subordinate staff consisting of a daroga and a muharrir is, in my opinion, weak, but of course this matter should entirely rest with the Engineer in charge, who alone can say what he requires. Considering that a large sum will now, probably, be spent on estate works, he might be permitted to strengthen or change the staff as would seem proper to him. The cost of supervision up to 15 to 20 per cent. of the outlay would not, I think, be unreasonable; but, perhaps, I am going beyond my province in touching professional matters.

CHAPTER II.

WASTE LAND.

Details of waste lands.

298. The following statement shows the details of waste or unassessed lands in the estate:—

Name of Estate.	Culturable waste.	Jungle included in village	Rajmankar including grazing grounds, buildings, &c.	* Rivers and creeks.	Jungle blocks.	Total.	REMARKS.
Chhamuka	169'41	1,014'98	4,358'12	7,732'93	84,901'08	49,798'25	
Kerara	142'07	408'00	5,081'01	1,846'90	434'01	7,011'99	
Kaledwip	178'49	2,283'34	4,664'87	746'56	87,374'40	46,037'18	
Panchmuka except two mukas named below.	848'48	1,725'22	8,925'94	0,189'70	2,433'51	22,718'96	
Mukas Jagoola and Saraswati ...	2,732'60	6,060'16	6,414'25	1,107'84	12,465'14	24,810'99	
Total	3,885'94	12,056'92	20,089'68	20,025'92	87,999'08	108,227'07	

* Part of river area having been included in village areas and jungle blocks, the area shown in this column is only what has been separately surveyed under rivers.

299. The area shown in column 2 under "Culturable waste" is principally in the seaside *Mukas* of Jagoola and Saraswati, which contain 2,732'60 acres out of the total 3,535'92, and the balance, 803'32 acres, spread over the rest of the estate, is comparatively of inferior quality, and has not, therefore, been taken up during this settlement, but is fit for cultivation, and it will in all probability be occupied in a few years. The large area of culturable waste in the two seaside *Mukas* mentioned above is of superior quality, but owing to the fear of salt-water floods, to which the place is subject, the whole culturable area has never been brought under cultivation, and the area under cultivation, year to year, varies considerably. In years of exceptional river floods, a larger quantity of land is cultivated than in ordinary years. I have recommended, elsewhere, the construction and maintenance of a salt-water *bund* and an embanked refuge for the *Mukas*, which, in my Mustagiri report, have been recommended to be kept *khas*, and these measures will, it is hoped, ensure a larger area being brought under cultivation than has hitherto been the

PART V.
CHAP. II.

300. The whole of the area shown in column 3 under jungles is, of course, not cultivable, but a good portion is, of which some 714 acres have been let out since the conclusion of the settlement, as shown in the

Jungle lands included in village areas.

following statement:—

Name of Elakah.	Area of jungle land included in village areas.	Area settled.	Rates at which settled.	Amount of rent.	Year from which settlement is to take effect.	REMARKS.
1	2	3	4	5	6	7
Ohhamuka	1,014-86	553-63	8 annas an acre.	Rs. A. 277 0	1302	
Kerara	403-00	...	...	...	...
Kaladwip	2,233-28	...	...	...	...
Panohmuka excluding the two sea-side Mukas.	1,725-32	160-43	8 annas an acre.	80 4	1302	
Mukas Jagula and Saraswati.	6,080-16	...	...	...	...
Total ...	12,056-62	714-06		357 4		

The rest of the jungle area which can be cultivated will be taken up by the raiyats at annas 8* an acre. This rate is the lowest in the estate, and is low enough, and need not be reduced.† The grant of favourable terms in 1880, as explained in the first proposal, page 24 (printed copy), resulted in a comparatively small extension of cultivation, and for petty reclamation of jungle lands included in the village areas (which should be reserved for raiyats and not let out to speculators), any especially favourable terms need not be granted. The raiyats will gradually go on extending cultivation, the progress of which, it seems to me, cannot be quickened by holding out the inducement of low rents, which, in fact, retard rather than accelerate extension of cultivation. With low rents, which the raiyats do not feel, they do not try their best to cultivate, but keep on large areas, paying rents therefor, as uncleared jungle, which renders it risky and difficult for others to take up lands beyond, for fear of wild animals to whom the intermediate jungles afford protection and shelter, and thus retard the progress of further extension by others. To prevent this, care should now be taken to let out to each raiyat applicant small areas at a time, which he can clear and cultivate within one year, and to discourage thoughtless applications, a year's rent at annas 8 an acre should be taken as deposit before applications are entertained. The procedure to be adopted for settling lands included in village areas should be as follows:—

From October to December, applications for reclamation should be received, and on the receipt of each application, with its deposit, it should be entered in Register No. 2 (form given below) and the applicant directed to demarcate the land he wants by mud pillars, and report the fact of his having done so within one month. If he has demarcated within the time fixed and the land has not been cleared by any one else, he will be allowed to take out an amin to mark the plot wanted by him in the trace of the village map in pencil and extract area thereof. The amin will be paid by the applicant at annas 12 a day. This is the rate sanctioned by the Commissioner in his No. 111W., dated the 29th May 1894, for the services of a *thita* amin when wanted by the raiyats for the identification of their plots. On the return of the

* At this rate (annas 8 an acre) 278 applications for 3,536 acres of land have been presented during the month of November 1894, showing that, in the opinion of the people, the rate proposed is not by any means high.

† This rate of 8 annas an acre is recommended for jungle villages, but not for cultivable waste in other villages which will be taken up at the lowest village rates.

amin, and there being no objection to the settlement of the land, a written permission will be given to the applicant to clear and cultivate the plot within one year. He will pay no rent the first year. In the second year, enquiry will be made to ascertain if the land taken up has been cultivated, and if it has been, it will be settled with the raiyat, at annas 8 an acre, with effect from that year, and the map will be inked, the land entered in the appropriate register, and the deposit credited to rent account. Ordinarily, an acre of jungle land yields a nett profit of Rs. 10, and annas 8 is not therefore by any means a high rent for it. If the land be not cultivated, and no valid reason shown for its non-cultivation, the *hukumnama* or permission to cultivate will be cancelled, the deposit forfeited, and the land made available for another raiyat. This, of course, will be rare, except in the event of storms or cyclones, and in such cases fresh *hukumnamas* will be granted to enable the applicant to try to cultivate next year.

Register No. 2 showing preliminary proceedings regarding settlement of jungle lands at raiyati rates.

Serial number.	Name of village.	Name, parentage and residence of applicant.	Date of application and amount of deposit.	Date of order directing demarcation.	Date of report of demarcation.	Date of Amin's deputiation.	Date of receipt of Amin's report.	Area of land applied for.	Note of objections, if any made, and how disposed of.	Date of grant of <i>hukumnama</i> .	Date of Eshah maharaj's report regarding cultivation.	Date and purport of Manager's final order.	Date on which the proposed settlement is entered in Register No. 1.	Date on which deposit is adjusted.	REMARKS.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

301. The area in column 4 consists of roads, *bunds*, grazing grounds, cattle-paths, burial grounds, jungles, orchards, ponds, and ditches, irrigation channels, water reservoirs, creeks, rivers and estate buildings, and no portion of it should be brought under cultivation. In every village, however, there are some wicked tenants, who often try and cultivate, with the mustagir's help, portions of grazing and burial grounds and cattle-paths, much to the annoyance of the law-abiding and peaceful villagers. Such encroachments on common rajsarkar lands should be stopped with a high hand. Enquiries will, of course, have to be made to discover clandestine cultivation once every year. On the back of the "*hukumnamas*" it has been printed that no rajsarkar *nalaik* land is to be cultivated except with the permission of the Manager, who cannot, however, give any such permission until he has inspected the spot and satisfied himself that the common interests of the village concerned is not likely to be injured by reason of the cultivation of the *nalaik* land applied for. After this notice, if any of the wicked raiyats would persist in encroaching upon common lands, they would be liable to prosecution for criminal trespass. This prohibition should, however, not apply to the raising of seedlings, which do not occupy land a long time; and, in years of exceptional floods, when considerable damage has been caused and ordinary land rendered for a time unfit for growing crops, a general permission should be given to grow them on rajsarkar lands. This exceptional concession in years of difficulty would of course not give any right to the tenants to convert rajsarkar *nalaik* lands into common cultivation fields.

302. Along the banks of rivers and creeks, alluvial lands are formed from time to time. Those formed since 1884, amounting to 141.05 acres, have been settled by public auction for Rs. 157-13-0. The raiyats in the estate are regularly allowed abatement of rent for diluvion, and they have no legal claim to settlement of new formations which are very much valued and will be cheerfully taken up at Rs. 3 to Rs. 5 an acre. These lands ordinarily suffer neither from floods nor drought, and if they are settled, they should be settled at fair rent or by public auction, as has been done with the Commissioner's sanction at this settlement.

PART V.
CHAP. II.

303. The area under jungles shown in column 7 includes creeks, jhila, meadows and lawns, besides jungles proper. A very large portion of this area is not likely to come under cultivation,—at any rate for many years to come. Some portions have been settled since the completion of settlement, as shown in detail in the following statement:—

Name of Block.	Area of jungle blocks.	Area settled.	Terms of settlement.	Amount of rent.	REMARKS.
1	2	3	4	5	6
Chhamuka ...	Acres. 34,401'03	Acres. 656'28	At annas 8 an acre ...	Rs. A. 337 12	This block has been settled with Kanika tenants as raiyats at the usual jungle land rate. It is to take effect from 1908.
		108'80	Rent-free 1st and 2nd years; annas 3 an acre 3rd to 7th year, and annas 6 an acre 8th to 12th year, after which the tenancy ceases, but may be renewed on fresh terms.	20 6 40 12	From 1906 to 1907. } This settlement has been made with a speculator with Commissioner's sanction. It is an ordinary reclamation lease, and the speculator has to make and maintain his own bands and embankments.
Korara ...	484'01	390'10	At annas 8 an acre ...	104 8	This settlement is to take effect from 1908, and is of a raiyati character as No. 1.
Panchmuka except two Mukas.	2,833'51	2553'51	Rent-free 1st and 2nd year; annas 2 from 3rd to 7th year, and annas 4 an acre from 8th to 12th year, after which the tenancy ceases, but can be renewed on fresh terms.	254 4 708 8	From 1906 to 1910. } This lease was, with the Commissioner's sanction, granted before this settlement. It took effect from 1900. It is an ordinary jungle reclamation lease. Rent is to be paid for the whole area, though considerable portion of it is unculturable and the rate of rent is in consequence low.
Mukas Jagmola and Saraswati.	12,466'14	.....	.....	.....	So long as immense quantity of culturable waste in these <i>Mukas</i> is lying uncultivated, much jungle land cannot be expected to be brought under cultivation.

From the above it will be seen that the Kanika people have taken, at annas 8 an acre, large areas from jungle blocks, in order to acquire a few years hence some permanent interest of a raiyati character. The speculators are outsiders, and the one who has taken the whole of the jungle area outside village boundaries in Panchmuka is a resident of Bengal.

Considerable areas of jungle lands are still available for reclamation, which should be granted in blocks of not less than 100 acres each. A fair portion of this jungle will be taken up by Kanika tenants singly or a number of them clubbing together. Any blocks not likely to be so taken up may be granted to outsider capitalists. All applications for leases of jungle blocks, whether by Kanika tenants or outsiders, are to be made to the Manager between October and December. On receipt of them each applicant will be required to demarcate the area applied for by temporary mud pillars and report his having done so within three months. He will then be directed to take out *thika* amin, paying him a fee of 12 annas a day, for surveying and showing the land, in pencil, in the traces of jungle blocks, and for extracting its area. If no objection has in the meantime been raised, and if the application is for lease as a raiyat at 8 annas an acre, and if a deposit of a year's rent has been made, the applicant will be granted a *hukumnama* for clearing and cultivating the block in two years and Register No. 2 in respect of it filled up. Usual enquiries as to cultivation will be made in due time, and if a fair portion has been cultivated or cleared, the area covered by the *hukumnama* will be entered in Register No. 5 and the settlement reported in usual course for sanction and inclusion in the records.

Applications for leases on special terms and by outsider capitalists will be treated differently. These applicants will, after making the usual demarcation, be required to make, for the area applied for, a deposit at the rate of 4 annas an acre, and to get the demarcated land shown in the traces of jungle blocks and its area extracted. The terms of settlement will then be settled between the Manager and each applicant separately with due regard to situation, quality, liability to damage, and other considerations. If no objection has in the meantime been raised his application, with a draft form of lease and *kabuliyat*, will be sent up for the Commissioner's sanction, and on receipt of that sanction lease will be executed and possession given with effect from 1st October next, i.e., from the commencement of the next *Anki* year. These leasees will be tenure-holders, and not raiyats. All deposits, whether by Kanika tenants or speculators, will be credited to rent account in the first year of the tenancy.

It has hitherto been usual to allow the lessees of jungle blocks to sell the timber standing on lands leased out, in order that by its sale the cost of clearance may be recouped. This concession is objectionable on the ground that it interferes with the forest management of the estate, as these lessees have it in their power to undersell the lessees of the forests. In future the lessees might be required to burn all the wood on the spot or use it for their own use, but not for sale. The ashes of burnt wood will considerably enrich the soil, and the cost of clearance would, to a great extent, be recouped by the increased produce. A specimen form of kabuliyat to be executed by the lessees on special terms of jungle blocks in Kanika is given below, in the hope that it might hereafter be found to be of some service:—

I , caste , resident of , aged years, son of , do hereby execute this kabuliyat in favour of the Collector of Cuttack for a block of jungle land containing an area of acres bounded on the—

North by
South by
East by and on the
West by

for the term of years, from to , subject to conditions specified below:—

1. That I shall have the right of clearing and cultivating the land within the aforesaid boundaries, and that within three months of my entering into possession, the temporary mud pillar marks previously erected, will be replaced by stones and maintained at my expense.

2. That the amount of rent payable by me from time to time during the currency of the lease be as follows:—

3. That if any portion of the leased area is let out to raiyats, I shall grant written leases and charge rent not exceeding one rupee an acre, and shall not disturb them in their possession to prevent their acquiring rights of occupancy on lands they may cultivate.

4. That at the expiration of the term I shall have the right of renewal of the lease on such terms as may then be agreed upon.

5. That I shall not interfere with the fisheries of creeks and other miscellaneous sources of income, except with the written permission of the Manager, and in so far as may be necessitated by my mode of cultivation.

6. That I shall construct, at my own expense, works which may be necessary for the protection of crops against floods and sea-waves, but I shall not construct any bund without the previous sanction of the Superintending Engineer.

7. That I shall carry out any reasonable orders issued by the Manager in charge of the estate, and in case of any difference as to what is a reasonable order, the decision of the Collector shall be final and binding on me.

8. That I shall have the right of clearing jungles only so much as may be brought under cultivation, and shall not unnecessarily cut down trees on land not so required for the immediate purpose of cultivation, and the timber and wood obtained by cutting down jungles will either be burnt on the spot or used for my own private consumption, but will not be sold or given away.

9. That the land leased out will be subject to all rights of way and water and other easements.

10. That I shall pay rent and cesses legally payable according to the following instalments:—

On or before 1st February	...	...	...	8 annas.
Ditto 1st March	...	...	...	4 "
Ditto 1st April	...	...	...	4 "

11. That for breach of any of the foregoing conditions my lease will be liable to be cancelled, and any dues payable to the estate remaining unpaid, realizable under the Certificate or similar Act which may be in force.

CHAPTER III.

AGRICULTURAL EXPERIMENTS AND IMPROVEMENTS.

304. Carolina paddy was tried some years ago, but the results were unsatisfactory, and so have been those of the experimental

Agricultural experiments and improvements not wanted at present.

cultivation of potatoes and sugarcane. The fact is that the whole estate is liable to be flooded, either

with fresh water or salt water, and the seasons are generally uncertain, especially towards the close of the monsoons, and the place is not suited for experiments, and there is not much chance for the introduction of any agricultural improvements. As shown above, 98 per cent. of the total cropped area is under rice, and this crop is not a very exhausting crop, and the soil is often enriched by the deposit of silt during floods, or improved by lying fallow when

PART V. washed with salt water. The limits of cultivation have not yet been reached,
 CHAP. IV. nor the available culturable area exhausted, and so long as there is room for extension, the need for agricultural improvements has not risen, and there is little chance of their being generally adopted. The estate, however, is being rapidly developed, and the wants of the people are fast increasing, and the time is coming when cultivable virgin soil being no longer available, attention will have to be directed to making the existing cultivated area yield more than before, and agricultural improvements will then be forced upon the people. In the meantime, improvements in other directions are urgent and have to be attended to.

305. There is one piece of open meadow land in the midst of jungle, called 'Rangani,' which seems to be peculiarly suited for cultivation by steam power. This piece measures about 1,000 acres and is not likely to be cultivated by ordinary Uriya tenants. It is a fine place, the soil is rich and of uniform level, and just suited for steam ploughing. The speculation is, however, risky, and should not be attempted in a Court of Wards' estate. There is good chance for a capitalist farmer, and I hope some one will turn up one of these days. A small *bund*, just to keep out tide water, will however be necessary before cultivation is commenced.

CHAPTER IV.

MAINTENANCE OF RECORDS AND MARKS.

306. A great deal of the value of the present survey and settlement will be lost if the records prepared and the marks put up are not properly maintained. For this work of maintenance in a large estate like this, a trained local agency is required, and for the creation of such an agency, suitable proposals have been made in my report No. 53, dated 6th July 1894, in which it has been recommended that the whole estate be divided into circles with rental of about Rs. 1,200 each, and local young men from each circle be regularly trained to qualify them for the performance by them of work connected with the maintenance of records and collection. The cost of reorganization and training, it has been shown, will not exceed the present cost of collection. It will, however, take some time before each circle has got its qualified local officer, and in the meantime some arrangements have to be made to carry on the work of maintenance, at least so far as this can be done without the yearly examination and the attestation of each khasra number or *ekpadya* entry and the comparison of the map on the ground with the existing facts, field by field; and the scheme described in the following paragraphs has, for the present, been devised, and it will be altered from time to time as experience is gained and the orders from the higher authorities are received.

Changes affecting records.

307. The changes affecting records may either—

- (1) Leave the total area in the estate, cultivated or otherwise occupied, unaltered;
- (2) Add to the above area; or
- (3) Deduct from that area.

308. The total area under cultivation and occupation is not altered when lands are transferred from one holding to another, or, in other words, when mutations of names only are effected. These transfers are due to—

- | | |
|----------------|-------------------------------------|
| (1) sale, | (4) inheritance, and |
| (2) gift, | (5) construction of public works on |
| (3) partition, | lands already under occupation. |

309. According to existing custom and practice, raiyati interest in land in the estate is not, as explained in paragraph 149 above, saleable except with the permission of the landlord, which is now ordinarily given as a matter of course, unless the purchasers are outsiders whom it is not considered desirable to have as tenants. The permanent tenures, rent-free or at quit-rents, are likewise subject to the condition against transferability by sale, and when they are sold in breach

of the condition, they are resumable and assessable at raiyati rates. There is, however, no restriction to the sale of parts of holdings, and ordinarily such sales usually take place. PART V.
CHAP. IV.

310. A gift of land is seldom made by Kanika tenants except in cases of endowments to Hindu idols to whom raiyati, rent-free and tonki (paying fixed quit-rents) lands

are sometimes endowed, the rent payable for them being paid either by the donors or by the *shabais* of the idols. In rare cases, gifts of land are made to Brahmans. There is no recognized practice about resumption of lands endowed for religious or charitable purposes, and during the present settlement I have refrained from resuming them. As such gifts are rare, it seems to me they might be allowed to go unresumed when made with the permission of the estate.

311. There is no especial custom concerning the partition of joint holdings in the estate. In some parts the eldest son gets what is locally called *jetha*, i.e., some

extra allowance for being the eldest son of the family. The custom about this is not general, and has not, so far as I know, been recognized by any competent court of law. In other respects, joint properties are divisible according to the personal laws applicable to Hindus and Muhammadans. Partitions are generally effected by amicable arrangement among sharers who are assisted by local *panchayats* and are afterwards registered in the estate *sherista*.

312. Inheritance is regulated here, as elsewhere, according to personal laws, and the estate at present never interferes with it. In cases of adopted heirs there is gener-

ally some quarrel and litigation, and it seems to me that the estate might register adoptions, charging a fixed fee of annas 8. This would prevent a good deal of avoidable litigation among the tenants. On this subject a separate proposal will hereafter be made for sanction.

313. The construction of public works on sites already under occupation would necessitate transfers of land from old to new holdings. The changes due to such transfer will, however, be discussed separately.

Transfers due to construction of public works.

314. All transfers, whether due to sale, gift, partition or inheritance, were incorporated in the records from time to time till the conclusion of the settlement, and for recording

subsequent transfers a register in the following form has been opened since 1st April 1894:—

Register No. 3 for recording transfers and mutations.

Serial No.	Name of Estate.	Name and land No. of village.	Name and residence of applicant for transfer.	Date of application.	Nature of transfer, whether by sale, gift, partition, or inheritance.	No. in the village record of the old holding and the number of fields in it.	Of old holding total—		Name, parentage, caste and residence of new tenant.	PARTICULARS OF LAND TRANSFERRED.				Status of new tenant.	If transferred by sale, the amount of purchase money paid.	Amount of fees paid.	Date of final order. If transferred by sale, the amount of purchase money paid.	Date on which khatmas granted.	Date of correction of records and maps and signature of A.M. do. it.	REMARKS.
							Area.	Rental.		Khasra No.	Area.	Class of soil and crop.	Serial as fixed by Manager.							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

The form of the above register has been fixed with due reference to the headings of the return No. III prescribed by the Board in their "Rules for the maintenance of records prepared under Chapter X of the Bengal Tenancy Act VIII of 1835." Some additions and alterations have, however, been made in the above headings to suit the circumstances of this estate.

315. The Board having sanctioned in their No. 297A., dated the 23rd February 1893, a fee of annas two per acre with a minimum of annas four and a maximum of Re. 1 for the registration of transfers, this fee is being realized since 1st April 1894, and up to 30th September 1894 transfers

PART V. have been registered and fees paid amounting to Rs. 232-10. The procedure
CHAP. IV. adopted for the registration of transfers in the Manager's office is as follows:—

On the receipt of an application for transfer, which has to be accompanied by the applicant's *hukumnama*, showing the details of his holding and the amount of rent and cesses payable therefor, it is examined to see if the entire holding or the entire *khassra* numbers included therein are proposed to be transferred, and if the holding stands in the name of the applicant alone. If so, the first 13 columns of the register, in respect of this petition, are filled up and printed notices are sent out by *tahsil* peons to be hung up in the villages in which the land proposed to be transferred is situate and also in those in which the applicant and his relations reside. A translation of the contents of the notice and of the instructions to peons for service thereof is given below:—

Form of notice.

"Whereas _____, resident of _____, has applied for transfer of his holding in village _____ to _____, resident of _____, and the day of _____ 18 _____, corresponding to the _____ day of _____ 13 Amli, has been fixed for the disposal of this application, this notice is published at a conspicuous place in village _____ in order that objections, if any, to the said transfer may be presented by petition to the Manager on the above date, and unless objections are so raised on the date fixed, they will not, after that date, be attended to."

Instructions for service of Dakhil-kharij notices.

"When issuing *Dakhil-kharij* notices to the peons for service, the jamadar will enter them in his process-book and obtain the signatures of the peons and explain the following instructions to them:—

1. The peon will go to the village where the petitioner applying for transfer resides, as well as, the village where the holding intended for transfer is situate, and in the presence of the headman and the *chaukidar* of the village (in case they are residents of the said village), as well as the relations of the petitioner and other residents of the village, have the duplicate copy of the notice posted on the wall or post of some religious house or *pathsala* in the village. (The notice is not to be hung up or made over to anybody.) After thus serving the notice, the peon will obtain an acknowledgment of service from the persons present on the occasion.
2. If there is no headman in the village, the above acknowledgment will be obtained from the *chaukidar* and other residents of the village. Should there be no headman nor a *chaukidar* in the village, the acknowledgment is to be obtained from the residents of the village attested by the signature of as many as possible, of at least three.
3. While going to a village with such a notice and returning therefrom, the peon will inform everybody he meets with about the proposed transfer.
4. In case of transfer of land situate in uninhabited villages, it is mentioned where the notice is to be served, and the procedure mentioned above is to be observed for its service.
5. Any of the peons not acting according to the above instructions will be severely dealt with, and a copy of the instructions is, therefore, to be made over to the jamadar for his and the peons' guidance."

If no objections have been raised within one month of the service of the notice, the proposed transfer is, on the date notified for its disposal, sanctioned, and if part of a holding is sold, the rent in column 14 is fixed by the Manager on the same principles on which the revision of rents for the whole estate has been made, and columns 15 to 18 are then and there filled up. The *hukum amah* filed with the petition is usually corrected the next day, and if entire holding is sold, is made over to the purchaser; and if part of a holding is sold, the numbers sold are cancelled from the *hukumnamah* and its area and rent entries are corrected, and the original *hukumnamah* so corrected is made over to the old tenant, and a new *hukumnamah* containing necessary particulars of the land sold is given to the new tenant.

316. When the applicant for transfer is one of the two or more holders of a joint holding, his application is accepted only if he sells his entire share, so that his name may be substituted by that of the purchaser, the holding continuing joint as before. A portion of a joint holding less than an entire share cannot be transferred unless the joint holding is first partitioned among the sharers, which can only be effected either by arbitration or by the Civil Courts. To avoid ruinous litigation, I have suggested in several instances to get the joint holdings partitioned by the sharers executing a stamped agreement, nominating arbitrators and empowering them to effect partition, and each sharer binding himself to accept the award. These awards are enforceable as

Procedure for recording transfers from joint holdings.

the decrees of Civil Courts under sections 525 and 526, Chapter XXXVII of the Civil Procedure Code. When partitions have been effected and separate holdings formed, each having its own khasra numbers, lands are transferred by sale as described in the last paragraph.

PART V.
CHAP. IV.

317. When the applicant is the only heir of a deceased recorded tenant, he has first to get his name registered as heir before his application for transfer is accepted. If he is one of several such heirs, his application is not received unless the descent of the holding of the deceased to all the heirs jointly or severally has been registered. If jointly recorded, one of the heirs can only sell his entire share, and not a portion of it. Parts of a holding can only be sold by a single recorded tenant, and if he is not such a holder, he has to effect necessary partition and registration before he is allowed to make such a sale.

318. If the khasra number or numbers of the land proposed to be sold is not given in the application, or if it forms part of the area of an entire khasra number, local enquiries are first made to fix khasra numbers. In such cases the applicant is required, before his application for transfer is registered, to take out a *thika* amin, paying him annas 12 a day, and get the necessary enquiries made. When the khasra numbers have been fixed for plots proposed to be sold, the application is registered and the usual procedure as described above is followed. Tenants wishing to sell parts of their holdings have ordinarily to pay this additional cost of amin's fees, and the splitting of holdings is thus to some extent discouraged.

319. If within the time fixed objections are raised to the proposed transfers, they are heard on the dates fixed and notified for the disposal of the applications, and in the presence of the objectors, the applicants and the intending purchasers, final orders are passed and the proposed transfers are either sanctioned or disallowed. Valid objections to transfers are ordinarily of two kinds: those referring to the assertion of the rights of pre-emption by the sharers of joint holdings or others, and those preferred by the younger brothers of the applicants when the holdings are recorded, according to custom, in the names of the eldest brothers as *kartas* of the families. According to the laws of pre-emption, the sharers of joint holdings or others, having rights of pre-emption, are allowed to purchase the land proposed for sale on payment of the purchase money mentioned in the application. When the younger brothers of the applicants object to the transfers, the applications are generally refused until the brothers settle their disputes among themselves.

320. The most difficult cases of transfers are those which are proposed to be made by the Hindu widows. According to Hindu laws, widows have only life interest in the immovable property left by their deceased husbands, and as such, they are incompetent to sell it without valid reason. Widow remarriage being prevalent in this estate, the transfers by widows have to be carefully watched, as before remarriage, especially if childless, they are generally desirous of disposing of their raiyati interest in land to the prejudice of the next heirs of their late husbands. When applications for transfers are made by widows, they are required to prove that their late husbands' reversionary heirs consent to such transfers, and that they have valid reasons for selling, such as to pay the cost of the marriage of daughters or to pay the rents for their holdings.

321. Transfers by sale are bound to be registered, as, without this registration, they are voidable on the ground of the want of the landlord's consent thereto. The purchasers themselves will insist on registration in order to get an unimpeachable title. Those by gift probably will also be voluntarily registered in order to make them valid. When holdings are partitioned, the sharers will be consulting their own especial interest to have separate holdings recorded to avoid future disputes. In all the above cases of transfers, registration will be effected without difficulty. Transfers by inheritance, however, may not in all cases be registered. When any land of a deceased tenant will be sold, inheritance must of course have first to be registered; but in other cases it is feared the heirs of

PART V. deceased raiyats would not willingly like to apply for registration. The first direction, printed on the back of each hukumnama, is to the effect that all transfers, whether by death, gift, partition or sale, must be registered in the estate office, but this direction has no binding force, and it may not be obeyed. The collecting agency, whatever it is, will, however, be required to report the death of recorded tenants and the names of the heirs of the deceased for each village on or before 1st August each year, and the heirs so named will be required to apply for mutation in time, so that their registration may be effected before the register is closed for the year on the 30th September following.

CHAP. IV. Reduction of area under settlement.

322. The changes resulting in the reduction of total area under occupation are ordinarily due to—

- (1) abandonment or relinquishment of cultivated land,
- (2) diluvions, or
- (3) abandonment of sites of public works.

323. I do not know if section 87 of the Tenancy Act has been enforced in Orissa. If that section is introduced, its provisions will be followed in dealing with abandoned holdings, and in the meantime, so far as this estate is concerned, I think a holding in it may be regarded as abandoned when one year's rent is in arrears and the recorded tenant has left the estate without making any arrangement for its cultivation and payment of its rent, or has died or absconded, leaving no heir or heirs. If this holding is resettled with another tenant on his paying arrear rent, it will be entered in Register No. 3 above and treated as a transfer, and the new tenants will pay transfer fees besides. If it is not so taken up, it will be entered in Register No. 4 (form given below) and reported for exclusion from settlement. Can portions of a holding be relinquished is a pertinent question in this connection? Hitherto such relinquishments have been discouraged, but I suppose if parts of holdings can be transferred, they may be relinquished as well. On this point a reference will be made, if necessary.

324. Old lands are constantly being washed away and, according to existing custom, abatement of rent is invariably allowed. The villages subject to erosion will be surveyed yearly and the extent of erosion ascertained, and the report for abatement of rent made in usual course.

325. At the present settlement all lands held under roads, canals, buildings and other public works have been separately recorded. If any of these will be abandoned either by Government, District Boards or estate the sites so abandoned will be entered in Register No. 4, form given below.

326. For recording changes due to abandonment or relinquishment of lands, cultivated or otherwise occupied, and to alluvion, Register No. 4 in the following form has been opened:—

Register No. 4 showing lands abandoned, relinquished, or washed away.

Serial number.	Name of Estate.	Name and tanzil No. of village.	Name and residence of tenant whose holding is abandoned or affected.	Number of khesra, nature of tenure or holding, and the number of field or plots in it.	EXISTING HOLDINGS OR EXTENT.		AREA ABANDONED, RELINQUISHED OR WASHED AWAY.			Year with effect from which relinquishment or abandonment of land and abatement of rent takes effect.	Cause of relinquishment or abandonment.	Abstract of Manager's order and date.	Number and date of order sanctioning abatement.	Page on which records corrected and name inked, and signature of amil doing the same.	REMARKS.
					Area.	Benial.	Khesra No. or Nos.	Area.	Benial.						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

The fact of abandonment of holdings shall have to be reported for each village by the collecting agency on or before 31st December every year, and on receipt of such report an attempt will be made by the Manager to communicate

with the recorded tenant, if living, or with his heir or heirs, and notice will be posted in the Sadar and the mufassal cutcherries, stating holding will be treated as abandoned, if not claimed within three months of the date of the notice, and if it is not so claimed, it will be entered in Register No. 4. The tenants desirous of relinquishing entire holdings or parts thereof, must apply on or before 15th June each year, and if no arrears are due, their application will be accepted and the land so relinquished entered in Register No. 4.

PART V.
CHAP. IV.

All the villages which are exposed to erosion will be surveyed along the banks by the Elakah muharrirs between October and December, and the area eroded ascertained and entered in Register No. 4.

The case of abandonment will be initiated by the collecting agency, that of relinquishment by the tenants, and that of erosion by the Manager or the Elakah muharrirs. In the first week of July every year, the abatement of rents for lands entered in Register No. 4 will be reported for sanction in order that the necessary sanction may be received before September, records and maps corrected and rent-roll prepared before December each year.

327. The changes resulting in the increase of the total area under occupation will ordinarily be due to—

- (1) Cultivation of alluvial land;
- (2) Occupation of culturable waste and jungle land included in village areas;
- (3) Resettlement of abandoned or relinquished land ; or
- (4) Construction of public works on unoccupied land.

328. There is a large river area (17,100-76 acres) in the estate, and

Settlement of alluvial land.

Settlement of alluvial land. new land is always in course of formation and old land in that of erosion. In paragraph 302 above, it has been shown that the alluvial lands formed since 1884 have been settled by public auction, like other miscellaneous sources of income, for grazing and other purposes. In the adjoining estate of Kujang, too, I understand the *palandas* have been similarly settled. If this auction system should continue to be followed in future, it will not be necessary to include the alluvial lands in the land records. But if they are settled with tenants like other lands, they will be shown in Register No. 5, being treated as extension of cultivation.

329. How much of each kind of waste land there is in the estate and

Settlement of waste land.

Settlement of waste land. how it is to be settled have been described in Chapter II of this Part. The cultivation of waste land would of course be an extension of cultivation, and as such shown in Register No. 5, except the extension of cultivation in jungle blocks, leased out to speculators on special terms, which will be entered in a separate register.

330. The resettlement of abandoned or relinquished holdings, after

Resettlement of abandoned or they have been entered in Register No. 4 and
relinquished land. excluded from settlement, will be extension of
cultivation and entered in Register No. 5.

331. For recording changes due to extension of cultivation and resettle-

Extension of cultivation and occupation how to be recorded.

Register No. 5 showing the settlement of waste, abandoned, relinquished and alluvial lands.

1	Serial number.
2	Name of Estate.
3	Name and tenst No. of village.
4	Name, percentage and residence of new tenant.
5	No. of plots.
6	Area.
7	ACCORDING TO SETTLEMENT RECORDS.
8	No. of plots.
9	Area.
10	ACCORDING TO FIELD MEASUREMENTS.
11	Class of soil and description of land.
12	Rent as fixed by Manager.
13	Whether land taken was waste or abandoned.
14	Land how to be occupied.
15	Status of new tenant.
16	Date of report for sanction.
17	Date and number of order sanctioning allotment.
18	Date on which records corrected and maps joined, and signature of amils during the same.
19	Date on which habassama granted.
20	REMARKS.

PART V.
CHAP. IV.

From November to May every year, local enquiries will be made by the Elakah muharrirs to ascertain, as far as possible, the extent of encroachments on *nalaik* village lands and of cultivation in village wastes and jungle blocks. With especial reference to the results of these enquiries, steps will be taken either to grant settlement of the area cultivated or to prevent their cultivation in future.

All cases of settlement of new land will of course be initiated by the applications of the interested parties to the Manager of the estate. The procedure for the settlement of waste and alluvial lands has been described in a previous chapter. When such lands are settled and the settlement has been sanctioned, the records will be corrected, the maps inked, the fact noted in the register, and *hukumnama* granted to the tenant.

All resettlements concluded from October to June will be reported for sanction in July following, in order that necessary sanction may be received before September, records corrected and correct rent-roll prepared before December each year.

332. The construction of public works, such as tanks, roads, buildings, masonry wells, canals, either made at the expense of the estate or the District Boards or Government, will cause changes in the records. If the works be executed by the estate on lands held by tenants, the rent thereof will have to be remitted, and in some cases, especially in those of rent-free and *tonki* lands, some compensation to be paid besides. For works by the District Board and Government, if made on land in the occupation of tenants, some compensation to them and to the estate will ordinarily have to be made, and if on *rajsarkar* waste land, compensation to estate may only be made. The facts of occupation of land by public works will be noted in Register No. 6 of the following form:—

A Register No. 6 showing sites taken up for estate buildings and public works.

Serial number.	Name of Elakah.	Name and tauri No. of village.	Name and nature of work and its cost, if known.	By whom made.	Area and description of land taken up.	Khassra No. or Nos.	How held before.	Amount of rent to be abated, if any.	AMOUNT OF COMPENSATION, IF ANY—		Date and No. of order sanctioning abatement.	Date of correction of maps and records and signature of amla doing the same.	REMARKS.
									To tenant.	To estate.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14

333. The leases on special terms for land included in jungle blocks need not be included in the registers to be kept for the maintenance of records. Such large settlements may instead be registered in the Register of Settlements No. 26 prescribed in Wards' Manual, Appendix V. These jungle blocks are outside villages, and they may as well be treated separately. When they are permanently brought under cultivation and settled after the expiration of the term of the leases at ordinary rates, they might then be reported for inclusion in the *jamabandies* and treated as separate villages.

The headings of the prescribed Register No. 26, for readier reference, are reproduced at this place:—

1. Consecutive number.
2. Description of lands settled and where situated.
3. Reasons for making the settlement.
4. Former assessment.
5. Date of commencement of settlement proceedings.
6. Party now settled with.
7. Assessment at present settlement.
8. Period of settlement.
9. Status of the person settled with.
10. Date from which the settlement to take effect.
11. Date of submission of report to Collector.
12. Authority confirming the settlement and date of confirmation.

334. The registers for the maintenance of records, viz., Nos. 2, 3, 4, 5 and 6, should be kept for the whole estate at Sadar office. The rules framed for the maintenance of records prepared under Chapter X of the Bengal Tenancy Act, VIII of 1885, are based on the assumption that the prescribed register and returns are to be kept by patwaris, or other corresponding local agency. The agency for this estate has to be created and trained, and even when a qualified agency has been found, it would not be sufficiently trustworthy to be entrusted with the responsibility of deciding the several points mentioned above, which are ordinarily expected to arise in the course of registration, and all the registers have, at least for the present, to be kept at the head office; and after a suitable local agency has been created, Register No. 3, referring to entries regarding inheritance, may be kept by that agency. These registers should be kept by the *Amli* year, which commences from about the 1st October and ends on or about the 30th September. They would show all the changes taking place during the year, and the records corrected in accordance with them will be correct so far as they can be made so without the field-to-field inspection and the comparison of entries with existing facts.

Where are maintenance registers to be kept.

335. The records to be corrected, as shown in paragraph 233 above, are—

- the traces of village maps;
- the detailed jamabandi ekpadyas or rent-roll; and
- (3) the khasras.

It has been arranged to get two sets of traces of village maps and jungle blocks* prepared by the Survey Department, to prepare three copies of the ekpadya and one copy of the khasras in the office. Including the original records there will thus be—

- (1) three sets of traces of village maps and two of jungle blocks;
- (2) three copies of the ekpadya; and
- (3) two copies of the khasras.

One set of village traces and one copy of the ekpadya will be deposited in the Collectorate record-room, and there will remain—

- (1) two sets of traces of village maps and one of jungle blocks;
- (2) two copies of the ekpadya; and
- (3) two copies of the khasras.

One set of the above will be for the use of the Manager, and the other for that of the collecting agency.

The Manager's copy of the records and the maps will be corrected as the Registers Nos. 3, 4, 5 and 6 are filled up. These corrections will be made by the establishment charged with the duty of keeping them. As soon as transfer of a holding or part of a holding has been effected, settlement of fresh land made or abatement of rent sanctioned, necessary corrections in the ekpadyas will be made, and the fact noted in the appropriate column of the registers. The village traces having been corrected in pencil before any change is mentioned, they will only be inked along with ekpadya corrections. At the close of the *Amli* year, according to which the registers will be kept, i.e., on or about the 30th September, the Manager's copy of the ekpadya and the maps will show all the changes in the year. A clean copy of the ekpadya will be prepared between October and December if the old copy is much corrected and rendered unfit for next year's use.

The copy of the ekpadyas and the maps with the collecting agents might be kept corrected in two ways: either the intimation of the changes recorded in the maintenance registers at the Sadar office might be given to them, or they might be required to come to Sadar and correct their copies by comparing the same with the corrected copy of the office records. The latter mode is more practicable, and it will be adopted, at least so long as a qualified agency is not employed on collection. The mufassal copy will be corrected between October and December, so that on the 1st of January following, when the collection season commences, the correct rent-roll may be with the collecting subordinates.

* As the collection agency will not require any traces of jungle blocks, and the Manager has the original traces for use, only one set of traces of jungle blocks need be prepared for the Collectorate.

PART V.
CHAP. IV.

336. In the arrangements made for the maintenance of records described above, I have avoided utilizing the local agency for this work, as I am fully convinced that, at the beginning, no local agency, however qualified, can be trusted with this work, and in my scheme sketched above, I have provided for the due registration of changes and correction of records by the establishment working under the Manager's direct supervision. The Board have sanctioned a temporary establishment of three amins for the maintenance of records, and these men are quite sufficient for all necessary work, and I have, in fact, recommended some reduction of the existing establishment to provide funds for payment of the extra establishment which I have asked might be made permanent.

337. If a qualified local agency is created for this estate, to secure which suitable recommendations have already been made, the work entrusted to it in connection with the maintenance of records will be as follows:—

Work to be done by the qualified local agency when created.

After correcting their copy of the records by comparison at the Sadar office they will, in the presence of raiyats, examine the map on the ground, comparing each khasra number with existing facts, field by field, and measure fields adjoining waste lands to detect clandestine encroachments, if any. This work will be commenced from 1st January and finished by 31st March following.

At the time of comparison a register of discrepancies will be prepared in the form prescribed and given below:—

Register No. 1 of discrepancies.

No. of the field.	Entry in the khasra which has to be corrected or altered.	Corrected or altered entry.	Explanatory remarks.
1	2	3	4

All the changes necessitating correction of records during the previous year ending with the 30th September last having already been made, very few changes are expected to be discovered by this field-to-field inspection, and the only useful purpose which it is expected to serve will be to show if any clandestine encroachments have been made on rajsarkar waste lands. Any such encroachments, if discovered, will, along with other discrepancies, be noted in the register, which is to be submitted to the Manager on or before the 1st April each year. In reference to the entries in this register, steps will be taken to get the changes registered in one of the Registers Nos. 3 to 6, and records thereafter will in due course be corrected. The attendance of tenants for the yearly field inspection will ordinarily be difficult to secure, and if the scheme of maintenance had entirely depended on this inspection, I have no doubt it would have had not much chance of success.

338. There were, as reported in Survey Report, dated the 10th August 1890, 2,917 permanent marks embedded during the survey of the estate, giving an average of 6.5 marks to the square mile. The trijunctions of village boundaries have been marked by stone pillars, 3 feet long by one foot square, and the survey stations by stone prisms, 2½ feet long, or by baked clay cylinders. In order to maintain these marks, it appears necessary that they should be inspected and their condition reported once every year. For this purpose a separate *mujmili* map may be prepared for each *klakah*, showing the position of the stones and the cylinders and their distinctive numbers. The preparation of the *mujmili* maps will not

Maintenance of boundary marks.

cost much, as they will be prepared in the office. With this *mujmili*, the Elakah amin will go round and note the condition of each stone in a register, the form of which will be as follows:—

PART V.
CHAP. V.

Register No. 7 showing result of annual inspection of survey marks.

Tauzi No. and name of village.	Stone or cylinder No.	Trijunction or survey.	Present condition.	REMARKS.
1	2	3	4	5

One amin will inspect all the stones and cylinders of one Elakah in about a month's time. If any stones or cylinders will be missing, new ones will be embedded, which the trained amins now in employ will be able to do. There are some stones in stock, and when they are exhausted, fresh supply will be procured and kept in stock for future requirements. The tenants and the collecting subordinates will also be required to report, from time to time, if the marks in their villages are damaged or removed. When a trained collecting agency has been secured, the maintenance of stones will be one of its main duties.

In the annual reports for this estate to be submitted in future, the question of the maintenance of records and marks, among other matters, will be discussed, and the facts relating to the maintenance of the boundary and the survey stones will thus be brought to the notice of the authorities once every year.

CHAPTER V.

PROPRIETOR'S ALLOWANCE AND EDUCATION.

339. The following statement shows the monthly allowances originally made, those being made at the last settlement, and those now being made to the proprietor and family:—

Person.	Rates* of allowance in 1862.	Rates* of allowance in 1882.	Latest rates of allowance.
1	2	3	4
	Rs.	Rs.	Rs.
Raja †	100	1,000	935
Rani	25	100	600
Old Raja's step-mother ‡ ...	100	200	300
Two Rani widows of the late Raja	200	200	400
Tribikram Bhanj. §			
Bebarta || ... ..	15	...	...
Mukhtar	12	12	12
Raja's idols	32	32	32
Guardian ... ..	...	100	...
Doctor ... ..	...	50	30
Tutor and Pandit ... ..	...	...	80
Total ...	484	1,604	2,389

* The amounts shown in these columns are taken from the last Settlement Report.

† The late Raja having died in 1897, the present minor Raja gets Rs. 935 a month.

‡ Died in 1893.

§ One of the widows is dead now, having died in 1893.

|| This allowance has been discontinued since 1891.

ART V.
H.R.P. V.

Besides the monthly allowance, the Raj family is paid certain sums for the performance of social and religious ceremonies and for other annual expenses, as detailed below:—

	Rs.
(1) Religious ceremonies—	
(a) Hori festival	650
(b) Gamha abhishek	350
(c) Pusya abhishek	250
(d) Chandan jatra	300
(e) Sunya abhishek	250
	<u>1,800</u>
(2) Social ceremonies—	
(a) Birthday ceremony, Rs. 400	900
(b) Annual Shradh ceremony, Rs. 500 }	
(3) Winter clothing and apparel, etc. ...	1,000
	<u>3,700</u>
The maintenance allowance at Rs. 2,389	...
per mensem	28,668 per annum.
GRAND TOTAL ...	<u>32,368</u>

There are, besides, extra amounts occasionally drawn for making presents, for purchasing furniture and horses and other extraordinary expenses, and the total amount of the proprietor's allowance, excluding house accommodation, is about Rs. 35,000 a year.

340. As Manager of the estate, I have had no connection with the Raja, who lives in Cuttack, but I am of course interested in his education. The estate is a fine property, and its Raja should be educated so as to fit him for the responsibilities of his position. He is in his 14th year and reads, I believe, in the 3rd class of the Cuttack Collegiate School.* No amount of undigested knowledge will, I fancy, enable him to guide himself by his own sense of right and wrong. The cost of education is, in my opinion, disproportionately small in comparison with the charge of his maintenance, and especially in regard to the income of the estate, which is now over Rs. 1,50,000 a year. I am afraid, however, I am going out of my province in touching a subject which does not directly concern me as Manager of the estate.

* The Raja has, I now understand, left school and is reading at home.

KANIKA SETTLEMENT OFFICE, GANJA,
The 27th December 1894.

SAKILAWAT HOSSEIN,
Manager and Settlement Officer.

INDEX.

SUBJECT.	Paragraph.	Page.
Abandonment of holdings, how to be dealt with	323	160
Addition to rent demand during last settlement	170	67-68
Agriculture, system of, described	90-99	34-38
Allowance for close measurement, amount of	210	88
" " " how made	218	90
" " " instructions for	209	87-88
Allowance to proprietor and family	339	165-66
Alluvions, how settled	276, 303	128, 143
" how to be recorded	328	161
Animals, farm	100	28
" wild	28	12
Appeals	208	87
Area, comparative details of	249	116
" by districts	4	2
" by elakabs	7	2-3
" under cultivation and occupation	251	117
" culturable waste	260	116-17
" District Boards	251, 254	117, 118
" Government	251, 253	117
" jungle reclamation lessees	251, 261	117, 120
" permanent tenure-holders	251, 258	117, 119
" raiyaats	251, 264	117, 121-22
" Raja	251, 255	117, 118
" Rani	251, 257	117, 118
" service jagir-holders	251, 262	117, 120-21
" waste	260	116-17
Assessment, how made	226	95-98
" of resumed lands	228	98
" preliminary work of	228, 224	94, 94-95
" subsequently revised	227	98
Attestation done by Mr. Datta	208	84
" original work done in course of	200	87
" procedure for	205	85-86
" time taken up in	204	84-85
Bhitar Kanika	8	2
Birds	29	13
Brahmottar tenures, area under	258	119
" " defined	80	29-30
" " sanand for	140	62-64
Buffaloes	102	28
Bunds (embankments) used as footpaths	15	8
Burial grounds	205	85-86
Canal	20	10
" area under	251	117
Cart traffic	25	11
Caste, distribution of	65	23
" tyranny of	66	23-24
Cattle	101	38
" diseases of	106	39
Cattle-paths, area under	250	116-17
Certificates issued for collection of rents	178	72-73
Cesses	231	99
Chaudna raiyaats	78	29
" " area held by	264	121-22
Climate	69, 70	26
Collecting agency	157	60-61
Collection, coercive measures for	175	71
" of illegal cesses	176	71-72
" system of	157	60-61
" " since expiration of term of last settlement	163	64-65
Cost of assessment	283, 284	122, 123
" attestation	283, 284	122, 123
" badar corrections	282	122
" cadastral survey	282	122
" khanapuri in fields	282	122
" marking stations and trijunctions	282	122
" preparing survey records and maps	282	122
" rate-reports	284	123
" settlement	283, 284, 285, 287	122, 123, 124-35,
" " records	285	123-24
" survey and settlement	285	125
" training local agency	282	122
" traverse survey	282	122
" " paid by Government	281	121-22
Creeks, area of	250	116-17
" as reservoirs of water	295	129-40
" described	18, 20	10
" how formed	16	8-9

SUBJECT.	Paragraph.	Page.
Crocodiles	87	15
Crops	84, 86	30-32, 33
" total area under.	83	30
Culturable area	4, 260	2, 116-17
Datta— <i>anugraha</i> tenures, area under	268	119
" " " defined	80	29-30
" " " <i>sanand</i> for.	140	52-54
Debottar tenures, area under	268	119
" " " defined	80	29-30
" " " <i>sanand</i> for	140	52-54
Demarcation	183	76
Diluvions, how to be recorded	324, 326	150, 150-51
Dispensaries	73	26
Disputes, boundary	192-197	79-81
" village	207	87
District Board, cesses payable to	18	7-8
" roads	13, 251, 254	7-8, 117, 118
Division of the estate into <i>elakahs</i>	7, 9	2-3, 3-6
" " <i>mukas</i> or <i>sillas</i>	9	3-6
" " villages	9	3-6
Elakah, area under each	7	2-3
" estate divided into	7, 9	2-3, 3-6
Embankments, area under	260	116-17
" described	15	8
" flood, of doubtful utility	289	136
" saltwater, proposed	291	137-38
Estate, general aspect of	6	2
" river system of	17	9
" survey of, notified under Act V of 1875	181	75
" total area of	4, 7, 249, 278	2, 2-3, 116, 129
" total rental of	278	129
Exports and imports	89	15
Fair rents how recorded	236	95-98
" rules for	226	95-98
Fees for grazing buffaloes	269	123-24
Ferries, District Board	26	11
" estate	26	11
" income from	276	127-28
Fields, average size of	5	2
" number of	5	2
Field-work, interruptions during course of	242	105
" <i>khanapuri</i> and survey	187	77
" supervision of	189	78
Fisheries described	31, 35, 36	13, 14, 15
" income from	268	123
Fishing castes	32	14
" nets	33	14
" season	34	14
Flood embankments	290	136-37
Floods, estate subject to	6, 172	2, 69-70
Forests (see <i>Jungles</i>).		
Fruit trees, income from	271	125-26
" previous management of	271	125-26
" rights regarding	276	127-28
Fuel	106	39
Government land, area of	261, 263	117
" revenue or <i>pesakkush</i>	128, 129	47-48
Grazing grounds in jungle blocks	104	39
" village areas	104	39
History of the estate from 1803 to 1869	129, 130, 132	47, 48, 49
Holding, abandoned, resettlement of	330	151
" average size of	5, 265	2, 122
" <i>chandra</i> } area and rent of	264, 278	121-22, 129
" <i>paAi</i> } defined	78	29
" <i>YAsai</i> }		
" number of	5	2
" splitting of	185	60
Honey and wax	20	13
" income from	273	126
Hukumnamahe, form of	236	103-104
Inspection by Mr. Finucane	245	105-107
" " Macpherson	246, 248	108-109, 111-15
" " Stevenson	247	109-11
Irrigation, area under	75	38-29
" means of	74	28
" channels	260	116-17
Jungles, area of	249	116
" described	3	3
" in village areas	298, 300	141, 142-43
" income from	270, 273	124-25, 129
" produce of	27	11-12
Jungle clearance, how settled	171, 261	68-69, 120
" leases to be granted for	308	144-45

SUBJECT.	Paragraph.	Page.
Kanika, component parts of	124	45
" origin of	123	45
" present and past status of	123	47
" situation and boundaries of	1, 2, 3	1-3
" the Rajas of	126, 129, 130, 132, 134.	45-46, 47-48, 48-49, 49-50, 50.
Khairat tenures, area under	248	119
" " defined	80	29-30
" " sanand for	140	52-54
Khamar lands in the past how recorded	256	118
Khasra how corrected	234	102
" when supplied	201, 202	84
Khatian how corrected	234	102
" how signed	225, 229	95, 98
Khasbas melak tenures, area under	258	119
" " defined	80	29-30
" " sanand for	140	52-54
Lands abandoned or washed away how to be recorded	326	150-51
Local agency for maintenance of records	308	147
" " training of	185	76-77
" " work to be done by	237	154
Maintenance of records, agency for	325	153
" " registers for	337, 300, 314, 326, 331, 332, 333.	154, 142-143, 147, 150-151, 151-152, 152.
" " boundary and survey station pillars	338	154-155
Maps how and when prepared	190	78
" corrected in settlement	236	102-103
Markets	53, 57	18, 19
" income from	274	125-27
Milk, average yield of	108	38
Mustagira, characteristics of	165	65
" remuneration of	166	65-66
" rights of	164	65
" when created	158	61
Pahi raiyata, area and rental for	264, 278	121-22, 129
" defined	78	29
Pasture, income from	269	123-24
" previous management of	269	123-24
People, ceremonies observed by	110, 112, 114	40-41
" cost of living of	109	40
" dress worn by	110	42
" dwelling-houses of	117	42
" food consumed by	115	41-42
" general condition of	107	39-40
" how employed	118	42
" marriage among	111	41
" state of education among	119	42
" uncertainty of crops affecting general condition of	108	40
" widow-marriage prevalent among	112	41
Peshkush	120	47-48
Pirottar tenure, area under	258	119
" " defined	80	29-30
" " sanand for	140	52-54
Police outpost	52	18
Population according to religion	61-63	19-20
" to sex, age and religion	60	19
" density of	59	19
" Hindu, according to occupation	64	20-22
" total of estate	58	19
Port Chandbali	40	15-16
" Mahurigaon at one time a	41	16
Prices-current	120	42-43
Proprietor, age of	124	50
" allowance of	339	155-56
" education of	340	156
" present	124	50
Public Works establishment	297	140-41
" suggestions for construction of	289, 98	136-37
Rainfall, amount of	67	24
" as affecting cultivation of the estate	68	24-25
Raja, area held by	251, 256	117, 118
Raja's mother, area held by	257	118
Rate-reports	211, 212, 214, 216	85, 89, 90
Rates, average	321	93
" number of	219, 222	91, 93
" orders regarding	212, 215	89-90
Records by whom to be corrected	326	154
" changes affecting	308, 322, 327	146, 150, 151
" complete list of	322	100-102
" how and when to be corrected	325	102-103
" how prepared in field	188	77-78
" how prepared in office	190	78

SUBJECT.	Paragraph.	Page.
Records how to be disposed of	237	108
„ supplied by survey party	202	84
„ to be maintained	233	102
Reduction of rent demand	169	66-67
Refuges, necessity for	291	137-38
„ where to be constructed	291	137-38
Registers of maintenance of records where to be kept	234	153
Relinquishment of land how to be recorded	233	150
Remission of rent	172, 173	69-70
Rent, arithmetical	226	98-98
„ demand up to date	174	70-71
„ fair	226	95-98
„ how recorded	226	95-98
„ old	226	95-98
„ revision of	227	96
„ theoretical	226	95-98
Rice cultivation	88, 89, 96	33-34, 37
„ trade in	43	16
Rights of collecting agency	164	66
„ Karjis	107	66
„ mortgaging	164	59-80
„ permanent tenure-holders	162	58-59
„ service tenure-holders	140	62-64
„ splitting	156	60
„ tenants at present settlement	163	59
„ „ before 1803	138	61
„ „ by custom	148	55
„ „ in 1845	139	51-52
„ „ in 1865	140	52-54
„ „ in 1880	146	56
„ „ regarding fruits	271	126-26
„ „ under the law	147	55
„ transfer	149	58-56
„ under-tenants	156	60
Rivers, area under	250, 251, 254	116, 117, 118
„ described	16-19 & 21-24	8-10, 10-11
Salt manufacture	45	16
Salted fish, trade in	42	18
Sands described	12	7
Satbhaya, a sanitarium	71	26
Sea-dyke	292	138
Seat of Raj	125	46
Serpents	88	15
Servants, estate	142	54
„ of <i>thani</i> villages	145	54-55
„ of the Raja	143, 144	54
Settlement of abandoned or relinquished holdings	223	150
„ of alluvial lands	276	128
„ of lands, increase from	280	130-31
„ of miscellaneous sources, increase from	279	130
„ „ term of	277	128
„ of reclaimed waste in jungle blocks	293	144-45
„ „ village areas	300	142-43
„ preliminary correspondence regarding	180, 182	74, 75, 76
„ time occupied in	240, 241, 243	104-106
Settlement, 1843-45	131	49
„ 1865-71	133, 135	60
„ 1871-80	136	50
„ 1880-82	137	50-51
„ mustajiri, 1843-49	158	61
„ „ 1862-70	160	61-62
„ „ 1871-72	161	62
„ „ 1873-74		
„ „ 1875-79		
„ „ 1880-90	163	63-64
„ term of last	168	67
Shops	87	19
Soil classification	82, 87	30, 33
„ by survey amins accepted	200	83-84
„ instructions for	198	82-83
„ supervised by Settlement Officer	199	83
Survey, agency for	186	77
„ assistance rendered in	191	79
„ costs of	231, 232	131, 132
„ instructions for	187	77
„ law for	181	75
„ time taken up in	239	104
„ training of local agency for	185	76-77
„ traverse	184	76
Temperature	69	26
Tenants, different classes of	77	29
Tenures, <i>brahmottar</i>	80, 268	29-30, 119
„ <i>datta anugraha</i>	80, 268	29-30, 119

INDEX.

SUBJECT.	Paragraph.	Page.
Tenures, <i>debtar</i>	80, 258	29-30, 119
<i>desh-kata</i>	145	54-55
jungle reclamation	81	30
<i>khairat</i>	80, 258	29, 30, 119
<i>khaskas</i>	80, 258	29, 30, 119
<i>pirattar</i>	80, 258	29, 30, 119
raiya	78	28
resumed	228	98
service	79, 263	29, 120-21
Terij, assessment, form of	223	94
" instructions for preparing	224	94-95
" comparative jamabandi, form of	230	99
" detailed jamabandi, form of	232	100-102
Transfer, extent of	150	57
Transferability of raiya lands	149	55-56
of tenures	151	58
Transfers	314	147
by gift	310	147
" heirs of deceased tenants	317	149
" Hindu widows	320	149
" holders of joint holdings	316	148-49
" sale	300	140-47
" single recorded tenant	318	147-48
" due to construction of public works	313	147
" inheritance	312	147
" partition	311	147
" objections to	310	149
" procedure for, when khasra number has to be ascertained	318	149
Treaty engagement	127	48-47
Under-raiyats, rights of	150, 260, 263, 266	60, 119, 121-22
Village areas, physical aspect of	11	6-7
Villages, average size of	10	6
described	47-52	17-18
number of	9	8-6
" of inhabited	10	6
" of uninhabited	10	6
Wages of labourers	121	48-44
of skilled labourers	122	44
Waste land, culturable	289	141
" settlement of, how to be recorded	229	151
" unculturable	301	143
Water-supply, insufficiency of	72	26
Weeds, income from	272	126

